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STATE OF MINNESOTA  
OFFICE OF ADMINISTRATIVE HEARINGS  
FOR THE MINNESOTA POLLUTION CONTROL AGENCY

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RE:

Proposed Amendments to Minnesota Rules,  
Chapters 7050 and 7052, relating to  
Tiered Aquatic Life Uses (TALU) and  
Modification of Class 2 Beneficial Use  
Designations.

-----  
OAH DOCKET NO. 5-9003-33998  
REVISOR'S NO. R-4237

The Public Hearing in the above-entitled  
matter came on for hearing before James Mortenson,  
Administrative Law Judge, taken before Marcia L. Menth,  
a Notary Public in and for the County of Wright, State  
of Minnesota, taken on the 16th day of February, 2017,  
at Minnesota Pollution Control Agency, 520 Lafayette  
Road North, St. Paul, Minnesota, commencing at  
approximately 3:35 p.m.

KIRBY KENNEDY & ASSOCIATES  
952-922-1955

## A P P E A R A N C E S

1  
2 APPEARING AS THE HEARING OFFICER:

3 JAMES MORTENSON  
4 ADMINISTRATIVE LAW JUDGE  
5 OFFICE OF ADMINISTRATIVE HEARINGS  
6 600 North Robert Street  
7 Post Office Box 64620  
8 St. Paul, Minnesota 55164-0620

E-mail: james.mortenson@state.mn.us

9  
10 APPEARING ON BEHALF OF MPCA:

11 JEAN COLEMAN, ESQUIRE  
12 Attorney At Law  
13 Minnesota Pollution Control Agency  
14 520 Lafayette Road North  
15 St. Paul, Minnesota 55155-4194

16 ALSO PRESENT:

17 Will Bouchard - Research Scientist - MPCA  
18 Kevin Molloy - MPCA

19 ALSO PRESENT (via teleconference):

20 Dan Olson - MPCA, Detroit Lakes  
21 Tom Estabrooks - MPCA, Duluth  
22 Paul Wymar - MPCA, Marshall

23 \*The Original is in the possession of  
24 Administrative Law Judge James Mortenson.  
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## P R O C E E D I N G S

1  
2 JUDGE MORTENSON: We are prepared to  
3 convene the public hearing in the matter of the rules of  
4 the Minnesota Pollution Control Agency relating to water  
5 quality standards, Tiered Aquatic Life Uses. This is  
6 OAH Docket Number 5-9003-33998 and Revisor  
7 Identification Number R-4237.

8 My name is Jim Mortenson, I'm an  
9 administrative law judge with the Minnesota Office of  
10 Administrative Hearings. The Office of Administrative  
11 Hearings is independent of the Minnesota Pollution  
12 Control Agency, or MPCA, the agency proposing to adopt  
13 the rules today, and of any other groups or persons  
14 participating in this hearing.

15 The role of my office is to provide  
16 hearings that are required by law and to promote  
17 justice, fairness to all participants and economy. I  
18 will do the things necessary and proper in my authority  
19 to achieve these ends.

20 Today is Thursday, February 16, 2017.  
21 And we've convened at 520 Lafayette Road North in  
22 St. Paul for this public hearing. And we're connected  
23 via interactive television to locations in Duluth,  
24 Detroit Lakes, and Marshall, Minnesota.

25 There's a handout available entitled,

1 "State of Minnesota, Office Of Administrative Hearings,  
2 Rule Hearing Procedures," it's available on the  
3 registration table just outside the door of this room.  
4 And I believe it's available at the locations remotely  
5 as well.

6 If you don't have one, please take a  
7 copy. It describes the procedures set up by the  
8 legislature for hearings like this. And while I will  
9 touch upon the highlights here this afternoon, more  
10 detailed information is included in the handout.

11 This hearing is part of the process  
12 by which agency rules are adopted under the Minnesota  
13 Administrative Procedures Act. The purpose of this  
14 hearing is to develop and receive information on what  
15 boils down to three key issues.

16 Namely, whether the agency has the  
17 legal authority to adopt the proposed rules; whether the  
18 agency has fulfilled all of the relevant legal and  
19 procedural requirements in order to promulgate the  
20 rules; and whether the agency has demonstrated that  
21 among the possible alternatives for rulemaking that were  
22 available, the rules that the agency has proposed are  
23 needed and reasonable.

24 While I'm glad to give anyone who  
25 will share comments today a little leeway in developing

1 the context for their presentations and arguments, I'll  
2 simply say that it would be most helpful to me and the  
3 best use of our time for agency panel members and  
4 members of the public to focus on these three key issues  
5 that I'll need to report upon.

6           Again, whether the agency has the  
7 legal authority to adopt the proposed rules, whether  
8 they fulfill all the relevant legal and procedural  
9 requirements in order to promulgate the rules, and  
10 whether they've demonstrated that among the possible  
11 alternatives for rulemaking that were available, the  
12 rules that the agency proposed are needed and  
13 reasonable.

14           Because of the technical and  
15 scientific nature of these rules I'll remind agency  
16 staff, as well as other commenters, to remember that I  
17 need to understand what you're talking about. So, you  
18 may need to translate scientific or highly technical  
19 words or concepts so that I and the public understand.

20           If I do not understand something I'll  
21 likely let you know, but please don't assume that I or  
22 the other people listening understand without some brief  
23 translation or explanation. This will greatly help me  
24 in my job and will ensure fairness in this process.

25           The agenda for today's hearing will

1 be first I'll complete my explanation of the hearing  
2 procedure, then I'll introduce the panel that is here  
3 from the Pollution Control Agency.

4 Next, the PCA must make its  
5 presentation of facts showing the need for  
6 reasonableness of the proposed rules and any other  
7 evidence necessary to fulfill its substantive and  
8 procedural requirements, which includes, first, the  
9 agency submitting its exhibits it wishes to include in  
10 the hearing record.

11 After that the agency representative  
12 will make an oral presentation about the rules and the  
13 reasons for them. And again, some translation and  
14 explanation for us laypeople may be required.

15 The remainder of our time will then  
16 be spent for questions and statements from members of  
17 the public. I will start with questions and comments  
18 from individuals connected here via teleconference. And  
19 we'll begin in those locations in alphabetical order.  
20 So, Detroit Lakes, Duluth, then Marshall, in that order,  
21 and then we'll proceed with St. Paul.

22 Any speaker may ask questions of the  
23 agency panel. You may also be questioned by the panel,  
24 myself, the judge, or any other people present at this  
25 hearing. I will likely take a short break right after



1 the agency's presentation as well before we get into  
2 public questions and comments.

3 In order to make sure that we have an  
4 accurate record for the number of people attending this  
5 hearing, including those at the teleconference  
6 locations, is requested to sign the hearing register  
7 that's located at the registration table. And I know  
8 there's one right outside the door here.

9 If you wish to speak or submit a  
10 written statement today, it's helpful if you're on the  
11 register. If you wish to speak, please place a check  
12 mark in the appropriate column on the register.

13 When you are called upon to speak,  
14 please speak from the witness table here or the table  
15 where you are remotely. And speak loudly and clearly so  
16 the court reporter we have here today can accurately  
17 take down your comments or questions.

18 When you begin speaking please state  
19 and spell your name, please give your address and  
20 identify the group or interest you represent, if any.

21 Pursuant to Minnesota Statute  
22 Section 10A.03, lobbyists must be registered with the  
23 Campaign Finance and Public Disclosure Board. The term  
24 "lobbyist" is defined at Minnesota Statute  
25 Section 10A.01, Subdivision 21.

1                   Generally a lobbyist is someone paid  
2 more than \$3,000 a year or who spends more than \$250 a  
3 year to influence legislative or administrative action.  
4 The full definition of that -- of lobbyist is located in  
5 the statute as I stated.

6                   Failure to properly register as a  
7 lobbyist may result in problems with the Campaign  
8 Finance and Public Disclosure Board, including up to  
9 \$1,000 fine.

10                   A rule hearing like this one is  
11 similar to a legislative hearing or meetings of a local  
12 board. You will have the opportunity to talk and to ask  
13 questions of the other participants. It's not like a  
14 court trial.

15                   Because this is not like a court  
16 hearing, you don't need to make the points you want to  
17 make by asking questions. You can state what your own  
18 views are, you can go directly to the point. It's also  
19 helpful if you have specific points as to a particular  
20 section or sections of the rule that you identify those  
21 sections.

22                   The record we make today may be  
23 reviewed not only by me, but by others who want to be  
24 sure that it's clear for everyone. As I mentioned  
25 earlier, this hearing is being transcribed by a court

1 reporter.

2                   It's very important that we obtain an  
3 accurate record of this hearing. Therefore, it's  
4 important for all speakers to remember the following:  
5 Speak clearly and slowly and loud enough that we can  
6 hear you. All statements must be clearly spoken.

7                   For example, we can't record a nod of  
8 the head. Please spell all proper names and technical  
9 terms the first time they are used. And only one person  
10 speaks at a time.

11                   Before I go much further, if you're  
12 like me and have a cell phone in your pocket, please  
13 ensure that it is set so that it doesn't disrupt the  
14 hearing as we're getting into things here.

15                   I may interrupt a speaker from time  
16 to time to ask for a spelling or to remind you of these  
17 other points. Please don't take offense at this, I want  
18 to be sure that we have an accurate record of what  
19 you're saying.

20                   If you have a written copy of your  
21 remarks that you can leave here as an exhibit, please do  
22 so, that would be very helpful to us. It can also --  
23 you can also submit your comments in writing after the  
24 hearing. Comments should be submitted electronically to  
25 the Office of Administrative Hearings' website.

1                   Simply Google Minnesota OAH and  
2 e-comments and you will find links to the correct  
3 webpage. Alternatively you may submit comments to my  
4 office at the address indicated on the back of the  
5 handout that I referenced earlier.

6                   After the close of the hearing you  
7 will have 20 working days or until Friday, March 17,  
8 2017 and then a five working day rebuttal period on all  
9 previously submitted comments until the close of  
10 business on Friday, March 24, 2017.

11                   That second period is not an  
12 opportunity to submit your initial comments or evidence.  
13 And pursuant to Minnesota Statute Section 14.15  
14 additional evidence may not be submitted after the close  
15 of -- the initial comment period closes on March 17,  
16 2017.

17                   Instead, that five-day period is an  
18 opportunity for you to respond to the comments submitted  
19 by the agency or others during the first comment period.

20                   After the second deadline passes on  
21 March 24th, I will prepare a report. And that report  
22 will contain my decisions about whether or not the  
23 agency has met the burdens that I discussed earlier.

24                   Namely, whether it has documented in  
25 statutory authority, demonstrated that it fulfilled all

1 the necessary legal and procedural requirements, and  
2 demonstrated the need for reasonableness of each portion  
3 of the proposed rules.

4 A more detailed description of the  
5 standards of review I will be using are found at  
6 Minnesota Rules Chapter 1400.2100. Rule 1400.2240  
7 describes in detail the decisions I may make and the  
8 process involved, if you're interested.

9 If you want to obtain a copy of my  
10 report, please e-mail my assistant. Her name and e-mail  
11 address are on the back of the handout of the  
12 procedures. You may also have marked that you want a  
13 copy on the sign-in sheet. If you left your e-mail or  
14 physical address a copy will be sent to you.

15 A copy of my report will also be  
16 available on the OAH website. The handout goes into  
17 other details about the hearing process that occurs  
18 after my report is issued. I'm not going to discuss  
19 that part of the process, you can read about it at your  
20 leisure.

21 Are there any questions about the  
22 hearing procedures? If not, we'll continue with the  
23 Pollution Control Agency's presentation. And,  
24 Mr. Molloy, after the presentation if you'll bring in  
25 the sign-in sheets and have the other sign-in sheets

1 from the other locations that would be helpful.

2 With that, he have Mr. William  
3 Bouchard with the Minnesota Pollution Control Agency, as  
4 well as Ms. Jean Coleman, counsel for the MPCA.

5 MS. COLEMAN: Thank you, Your Honor.  
6 My name is Jean Coleman, which is spelled J-e-a-n,  
7 C-o-l-e-m-a-n. And I am the staff attorney with the  
8 Minnesota Pollution Control Agency, referred to as MPCA,  
9 with an address at 520 Lafayette Road North, St. Paul,  
10 Minnesota, ZIP code 55155.

11 I'm appearing in this rule proceeding  
12 on behalf of the Minnesota Pollution Control Agency. As  
13 you stated, the Minnesota Pollution Control Agency is  
14 proposing amendments to Minnesota rules governing the  
15 water quality standards.

16 The amendments are contained in the  
17 rule as published in the state register, copies of which  
18 are available on the table outside the door to this  
19 room.

20 I'd like to introduce the staff from  
21 MPCA who are here today to make a brief presentation  
22 about the rule proposed, the proposed rule amendments  
23 and to respond to questions as needed.

24 Dr. Will Bouchard is on my left, he  
25 is a research scientist with the Water Quality Standards

1 Unit of MPCA's Environmental Analysis and Outcomes  
2 Division. Mr. Bouchard is the lead scientist for the  
3 development of the Tiered Aquatic Life Uses, or TALU,  
4 T-A-L-U, proposed rules. After the introduction of the  
5 hearing exhibits, Mr. Bouchard will make a presentation  
6 on the proposed rule amendments.

7 Kevin Molloy is also with us today.  
8 And he is the MPCA rule coordinator for this rulemaking.  
9 Mr. Molloy manages the administrative procedures  
10 requirements of the rule and is the point of contact for  
11 process-related questions.

12 Before Mr. Bouchard makes a  
13 presentation I would like to submit into the hearing  
14 record the exhibits outlined in the list of hearing  
15 exhibits and contained in the multiple three-ring  
16 binders at your desk. Copies of these exhibits are also  
17 available on the table outside the door to this room.

18 The purpose of these documents, as  
19 you outlined, Judge Mortenson, is to, first, document  
20 the legal authority of the Minnesota Pollution Control  
21 Agency to adopt the proposed rule.

22 Secondly, to demonstrate that the  
23 agency has fulfilled all relevant legal and procedural  
24 requirements for promulgating the rule. And lastly, to  
25 demonstrate that each portion of the proposed rule is

1 needed and is reasonable.

2 I will review the exhibits and relate  
3 each of the exhibits to one of the three purposes that I  
4 just mentioned. There is an index of the exhibits at  
5 the front of the first hearing binder.

6 You have three hearing binders in  
7 front of you and the exhibit list is at the beginning --  
8 at the front of that. Actually, I think it's at the  
9 front of each of the binders.

10 Exhibit C contains the text of the  
11 proposed rule amendments. Exhibit D contains the  
12 statement of need and reasonableness, which we will  
13 refer to as the SONAR or S-O-N-A-R, the SONAR that was  
14 published with the rule.

15 The SONAR documents the statutory  
16 authority of the Minnesota Pollution Control Agency to  
17 adopt the proposed rule. The MPCA has legal authority  
18 to promulgate and revise water quality rules and water  
19 quality standards under Minnesota Statutes  
20 Section 115.03, Subdivision 1, and Minnesota Statutes  
21 Section 115.44.

22 The SONAR in Exhibit D also  
23 demonstrates that each portion of the proposed rule is  
24 needed and is reasonable. The SONAR includes both a  
25 general description of why the rule is needed and



1 reasonable, as well as detailed descriptions of why each  
2 proposed rule part is needed and reasonable.

3 Many of the other exhibits  
4 demonstrate that the agency has fulfilled all relevant  
5 legal and procedural requirements. These include in  
6 Exhibit A the request for comments from August 25, 2014.  
7 In Exhibit C, the revisor's approval of the proposed  
8 rule.

9 In Exhibit E, the certificate  
10 verifying the submission of the SONAR to the legislative  
11 reference library. In Exhibit F, the dual notice of  
12 hearing as mailed, as posted electronically on the MPCA  
13 webpage and as published in the state register on  
14 December 19, 2016.

15 In Exhibit G, the certificate of  
16 mailing the dual notice of hearing and the certificate  
17 of accuracy of the mailing list. In Exhibit H, the  
18 certificate of additional notice and evidence of  
19 implementation of the additional notice plan.

20 In Exhibit K, evidence of compliance  
21 with requirements to notify legislators, to notify the  
22 Department of Agriculture, and to notify municipalities.

23 And also in Exhibit K, the approval  
24 by the Office of Management and Budget of the agency's  
25 fiscal analysis of the impact of the rules and the

1 certificate of mailing that notice to those persons who  
2 requested -- the certificate of mailing notice to those  
3 persons who requested that a hearing be held.

4 Exhibit I includes copies of comments  
5 on the proposed rule that were received by the MPCA  
6 during the prehearing comment period. At this time the  
7 MPCA will also introduce Exhibits L1 through L8.

8 These exhibits include additional  
9 technical documents supporting the rule, a list of  
10 changes made to the SONAR to correct minor errors and  
11 the SONAR with those revisions, a copy of the slides  
12 from the presentation MPCA will be making today at the  
13 hearing, and a sheet of draft modifications to the  
14 proposed rule amendments that are being considered by  
15 the MPCA in response to comments received in the  
16 prehearing comment period.

17 Your Honor has a set of all these  
18 exhibits. And as I mentioned, a set of all the exhibits  
19 is located at the table near the door to the room.

20 In addition, we have made multiple  
21 copies available of the rule text, the presentation  
22 slides, the list of changes made to the SONAR to correct  
23 minor errors, and the sheet of draft modifications to  
24 the proposed rule amendments that are being considered  
25 by the MPCA.

1                   As an alternative to paper, hearing  
2 attendees can access all the hearing documents on the  
3 MPCA website. And the website address and a Wi-Fi  
4 access code are written on the white board behind me.

5                   Now Mr. Bouchard will make a  
6 presentation outlining the proposed rule amendments and  
7 summarizing the need for and reasonableness of the  
8 proposed rule amendments.

9                   The presentations will take 45 to 60  
10 minutes. And when finished, Mr. Bouchard will be happy  
11 to answer any clarifying questions on the material  
12 presented. I have nothing further to introduce, Your  
13 Honor.

14                   JUDGE MORTENSON: Exhibits A through  
15 L as offered in the index are admitted into the record.

16                   MS. COLEMAN: Thank you.

17                   JUDGE MORTENSON: Please proceed.  
18 Thank you.

19                   MR. BOUCHARD: Thank you. My name is  
20 Will Bouchard, W-i-l-l, B-o-u-c-h-a-r-d, and I'm a  
21 research scientist at the Minnesota Pollution Control  
22 Agency.

23                   Just to cover what my presentation  
24 will address in this presentation, I'm going to provide  
25 an introduction to water quality standards and put the

1 Tiered Aquatic Life Uses parameters into that context.

2 I'll cover the statutory authority  
3 for the proposed rule, what is the Tiered Aquatic Life  
4 Uses framework, why it's needed, why it's reasonable.

5 I'll summarize some of the outreach  
6 that we've done as part of this rule and provide a  
7 summary of some of the comments we received for the  
8 hearing and some preliminary responses by the MPCA.

9 So, to begin with, introduction to  
10 water quality standards, what are they. They're a  
11 fundamental tool of the Clean Water Act. They're an  
12 interaction of science and policy for values.

13 They address three main questions:  
14 What and who are we protecting, what conditions are  
15 protective, and how do we maintain high water quality.

16 So, we can -- you can refer to what  
17 and who we're protecting as the uses, what conditions  
18 are protected are the standards, and how we maintain  
19 high water quality antidegradation.

20 So, how TALU fits into the water  
21 quality standards framework is that it revises the uses  
22 and the standards portion of water quality standards.  
23 It does not revise the rules related to antidegradation.

24 So, the first part of water quality  
25 standards is who and what is protected. So, the states

1 are responsible for classifying water bodies by  
2 beneficial uses in Minnesota. We have seven beneficial  
3 uses that range from drinking water to limited resource  
4 value water.

5           It's important to note that multiple  
6 beneficial uses apply to water. So, waters that are  
7 protected for aquatic life and recreation are also  
8 protected for Classes 3 through 6. The Tiered Aquatic  
9 Life Use framework only affects part of Class 2, aquatic  
10 life and recreation.

11           The next question is, what conditions  
12 are protective? Standards identify the conditions that  
13 are needed to support the beneficial uses. They can be  
14 statewide or region specific, they can be narrative or  
15 numeric.

16           To give you some examples of these,  
17 some standards that are part of Class 2 are aquatic life  
18 and recreation. The narrative standard, for example, is  
19 the normal fishery and lower aquatic biota shall not be  
20 seriously impaired or endangered. And this is to  
21 protect healthy aquatic communities.

22           The standards can also be numeric,  
23 such as 6.9 nanograms per liter total mercury in the  
24 water. And this is to protect fish and wildlife eating  
25 fish. Another example is dissolved oxygen, five

1 milligrams per liter of oxygen as a daily minimum. And  
2 this is to protect fish survival, growth and  
3 reproduction.

4 The third leg of water quality  
5 standards is antidegradation. And this protects and  
6 maintains existing uses, prevents degradation of high  
7 water quality unless conditions are met, and it protects  
8 and maintains the quality of outstanding resource  
9 waters. The proposed TALU rule amendments do not revise  
10 the antidegradation rule.

11 How are standards used? There are  
12 measures of benchmarks, so they help with communication  
13 so we can inform stakeholders as to the water quality in  
14 the state, are things improving, are things getting  
15 worse, where are they improving, where are they  
16 declining.

17 They're used for monitoring and  
18 assessment to determine if our streams, lakes, and  
19 wetlands are meeting those beneficial uses or not.

20 They're also used in controls to  
21 ensure those are protected or to restore conditions when  
22 they're degraded by using permits such as water  
23 quality-based effluent limits, antidegradation review or  
24 total maximum daily load studies, or TMDL.

25 So, I want to cover the statutory

1 authority for the rule. The Administrative Procedures  
2 Act requires that an agency proposing the rule has  
3 statutory authority to do so. For this rulemaking the  
4 MPCA has both state statutory authority and is required  
5 by federal regulations to do so.

6 The Clean Water Act requires that  
7 states establish water quality standards. And in terms  
8 of the state, the Minnesota State Statutes, these are in  
9 115, gives the MPCA authority to classify waters of the  
10 state, also gives the MPCA authority to establish or  
11 alter standards for any water of the state or to perform  
12 all acts necessary to participate in delegated Clean  
13 Water Act programs, such as NPDES permitting.

14 So, now we get to what the Tiered  
15 Aquatic Life Use framework is. To summarize it in just  
16 one phrase, it's a framework that assigns biological  
17 goals to streams based on their biological potential and  
18 then assesses if those goals are attained.

19 So, the important elements are bolded  
20 and underlined here. So, it's refining the goals for  
21 biological communities for streams, it doesn't affect  
22 lakes or wetlands, based on their potential, based on  
23 what is attainable in those systems biologically.

24 Here's the seven beneficial use  
25 classes again. And as I mentioned, the Tiered Aquatic

1 Life Uses framework only affects part of Class 2, and  
2 that's aquatic life.

3                   And although we're only talking about  
4 one part of the seven beneficial uses, it's one of the  
5 most important because it protects fish, insects,  
6 mussels, plants, and other organisms that rely on  
7 aquatic habitat for survival, as well as the ecosystem  
8 services that they provide.

9                   So, why is a TALU framework needed?  
10 I'll start with a little bit of history here.  
11 Historically the aquatic life protections relied heavily  
12 on chemical standards. I provided some examples of  
13 those earlier on, such as dissolved oxygen or ammonia.

14                   For the last 20 years the MPCA has  
15 been using narrative biological standards to assess  
16 biological conditions. The reason why biological  
17 standards are important is because they provide a direct  
18 measurement of whether or not the aquatic life use  
19 goals, the beneficial uses are being met in these  
20 waters.

21                   And Minnesota has a relatively long  
22 history performing biological monitoring. The  
23 monitoring -- the biological monitoring program as it --  
24 basically how it looks now has its roots in work that  
25 was done in the early '90s to develop this program.



1                   This included the development of  
2 indices of biological integrity, which are models which  
3 measure the health of fish and macroinvertebrates in  
4 this case, as well as biological criteria. So, the  
5 thresholds that are used to determine whether or not the  
6 aquatic life use goals are being met.

7                   This corresponded in the early '90s  
8 with the adoption of narrative biological standards into  
9 rule. And after this initial program was developed,  
10 these indices of biological integrity were added to the  
11 standards and they were used to add waters to the  
12 impaired waters list. So, we have waters that are  
13 listed as being impaired based on these biological  
14 assessment tools.

15                   In the 2000s an upgrade to the  
16 program began. And this included the development of  
17 statewide IBIs and tiered biological criteria, which now  
18 brings us to the incorporation of these tools into rule.

19                   So, why is Minnesota ready for a TALU  
20 framework? We have a long history of using these tools.  
21 We understand a lot about these biological communities  
22 because we've done a lot of work in these systems.

23                   So, this is a map of streams that  
24 have been sampled across the state for fish and  
25 macroinvertebrates. And there's now over 5,000

1 locations where we've sampled these organisms.

2           So, using this information we  
3 understand a lot about how these communities vary  
4 naturally and how they're impacted by stressors,  
5 impacted by human activities.

6           From this information we've developed  
7 robust tools for measuring aquatic life health. And  
8 these are the indices of biological integrity or the  
9 IBIs. And these are models that assign a score of  
10 health to a community based on a sample collected from a  
11 stream.

12           So, in this example we have a fish  
13 community that scores a 70 out of a hundred, hundred  
14 being the best, zero being the worst. So, it looks  
15 pretty good, it's closer to a hundred than zero, but the  
16 question is, does this meet our aquatic life use goals.

17           And this is where the biological  
18 criteria come in. And these criteria are based on sets  
19 of reference sites which meet the beneficial use.

20           So, that's a representation of what  
21 we want to see streams to be scoring or fish communities  
22 or macroinvertebrates to be scoring in order to say that  
23 the community is meeting that beneficial use.

24           So, a fish community that scores a 32  
25 is not meeting that threshold, it is impaired. So, that

1 triggers a stressor identification study to determine  
2 why that community is not meeting that goal and then a  
3 plan to correct those problems and restore that  
4 community to at least a score over 50.

5 The MPCA has gone through an  
6 extensive program review to determine the technical  
7 rigor of its biological assessment program. So, we've  
8 had four reviews by a third party to assess this  
9 following EPA methods. And the methods guidance  
10 document is here in this image.

11 This review determined that  
12 Minnesota's program was among the top in the United  
13 States. It scored a four, which is the highest level  
14 that's possible, and joins just a handful of other  
15 states that can boast having such a high-level program.

16 This indicates that the state is  
17 technically capable of supporting a TALU framework.  
18 We've extensively documented in a series of reports,  
19 guidance documents and peer-reviewed literature the  
20 authority information for the program.

21 So, why is the TALU framework  
22 reasonable? Right now we have a one-size-fits-all goal.  
23 So, if you think back to the diagram of the index of  
24 biological integrity, a score of 0 to 100, a score of 50  
25 is our goal. That's either pass/fail. You're either

1 meeting that goal or you're not.

2           There's a lot of diversity in the  
3 state in terms of conditions we see in our streams. For  
4 example, the West Branch Little Knife River is in  
5 Northern Minnesota, it has a largely undisturbed  
6 watershed. It has biological communities, the fish and  
7 macroinvertebrates that are near natural. It scores  
8 much better than our current goal.

9           Little Cedar River, it has good  
10 biological communities, it meets our goals. However, it  
11 doesn't greatly exceed those goals.

12           And then we have systems like  
13 Judicial Ditch Number 7, which doesn't meet our current  
14 aquatic life use goals. The beneficial use is not  
15 contained in those waters.

16           And this is because it's maintained  
17 for drainage and lacks the habitat to support the same  
18 community that you would see in a natural meandering  
19 stream where you have diverse habitat that can support a  
20 diverse aquatic community.

21           So, the Tiered Aquatic Life Use  
22 framework refines these goals and provides three  
23 options. This includes the exceptional use, the general  
24 use, and the modified use. So, the exceptional use is  
25 assigned to these high-quality waters. So, they have

1 higher biological criteria or higher threshold that they  
2 need to meet.

3 The general use goal is equivalent to  
4 our current goal, either our Class 2A or Class 2B. And  
5 the modified use is designated for waters that have  
6 legally altered habitat and they're determined to be  
7 unable to meet our current goal.

8 So, to compare these different goals  
9 on a biological condition gradient, the blue in this  
10 illustration is natural communities, basically  
11 undisturbed communities. The red at the bottom is a  
12 highly degraded community that doesn't meet our goals.

13 The exceptional use is towards the  
14 top. Again, these are communities that are close to  
15 natural or undisturbed. The threshold for the general  
16 use is a step down from that. These are still good  
17 communities.

18 Structurally they're still largely  
19 intact, although you may have lost some of the species  
20 that you would have seen in an exceptional use.  
21 Functionally they're still very much intact.

22 The modified use is a step down from  
23 that. And in these systems you see you've lost some  
24 more of the structure, you've lost some of the function,  
25 but this is consistent with what we see in systems that

1 are maintained for drainage and don't have habitat to  
2 support the same aquatic community that you would see in  
3 a natural system.

4 The assessment of these goals is  
5 similar to how the current assessment is done, there's  
6 just more options.

7 So, we have a stream that's  
8 designated as an exceptional use and it becomes degraded  
9 to the point where the biology no longer scores as an  
10 exceptional use, it now scores as a general use, then it  
11 would be impaired and it would trigger the stressor  
12 identification to determine why it's no longer meeting  
13 that goal and develop a plan to restore it to that  
14 condition.

15 The same is true for the general use  
16 and modified use. Once those uses are established and  
17 those need to be maintained, if they're degraded, they  
18 become impaired and they need to be restored.

19 Now, with the bars you can't go down.  
20 Once you do that you've lost the existing use and it  
21 needs to be restored. However, if conditions improve  
22 and they move up to the next level, then they can be  
23 redesignated to the next higher class that's  
24 demonstrated as attainable.

25 So, how do we determine which of

1 these three categories the streams belong to? The first  
2 step is to look at the biology. So, based on a sampling  
3 of the biological communities, does that stream meet the  
4 general or the exceptional use.

5 If the answer is yes, then we've  
6 demonstrated that use is attainable because it's  
7 currently being met. So, we have ditches in the state  
8 that meet the general use, so they would be designated  
9 as general use. That's establishing that that's an  
10 existing use and it has to be maintained.

11 If the answer is no, though, then  
12 that triggers a use attainability analysis to determine  
13 what the highest use is.

14 So, the first step in this is asking  
15 whether or not the habitat is limiting the biological  
16 communities. If the answer is no, then it would be  
17 designated as general use and most likely would end up  
18 being impaired.

19 If the answer is yes, then the next  
20 question is, is that limiting habitat the result of  
21 legal human activities. And for the most part what we  
22 mean here is, is it maintained for drainage, in other  
23 words, been channelized.

24 If the answer is no, then it would be  
25 designated as a general use. And there's a number of

1 substeps within this one, which I'll describe on the  
2 next slide. If the answer is yes to this, then the  
3 stream would be eligible for a modified use.

4 So, that's the cliff notes version of  
5 the Use Attainability Analysis. This is the more  
6 detailed version described in the SONAR and also  
7 described in Exhibit S-63, the draft technical guidance  
8 designating aquatic life uses in Minnesota streams and  
9 rivers.

10 The yellow circles here indicate  
11 those three questions that we just went through on the  
12 previous slide. So, in the upper right corner those two  
13 boxes represent the question of whether or not the  
14 general use or the exceptional use is being met.

15 If the answer is no, then it moves to  
16 whether or not the habitat is limiting those  
17 communities. Then, if the answer is yes, we move to  
18 this larger bubble, which includes several questions,  
19 which that final question of whether or not the habitat  
20 limitation is a result of legal human activities.

21 So, the first part of this question  
22 is -- refers to 40CFR, 131.10(g), Items 1, 2, or 5. And  
23 these are there to determine whether or not the limiting  
24 habitat is a result of natural conditions.

25 If the answer is no, it's not due to



1 natural conditions, then the next question is, is the  
2 habitat modified by human activities, is it channelized.  
3 If the answer is yes to that, then it moves on to can it  
4 be restored using proven restoration designs or is  
5 natural recovery likely within five years.

6 So, are the modifications to the  
7 habitat temporary or is it a system that has been  
8 maintained for many decades and the intent is to  
9 continue maintenance within that system.

10 If the answer is no, then the next  
11 question is, does 40CFR, 131.10(g), 3 or 4 apply. This  
12 refers to whether or not the habitat is altered and  
13 cannot be feasibly restored. If the answer is yes, then  
14 the next question is, is the activity consistent with  
15 its existing use. And this is in 40CFR, 131.3(e).

16 This refers to whether or not the  
17 general use or the Class 2B or 2A was attained on or  
18 after November 28, 1975. If it can be demonstrated that  
19 it was, then that's the existing use and it cannot be  
20 changed to a modified use. If the answer is yes, then  
21 the modified use would be a possibility.

22 So, the Tiered Aquatic Life Uses  
23 framework was developed alongside the development of the  
24 Intensive Watershed Monitoring Strategy, which the MPCA  
25 and local partners used to sample intensively in six to

1 ten watersheds every year, six to ten major watersheds.  
2 There's 80 major watersheds in the state.

3 During that sample during that  
4 year -- actually, it's two years of the intensive  
5 sampling, biological, chemical, and physical data is  
6 collected from a large number of sites within those  
7 watersheds.

8 And this is done on a ten-year  
9 rotating basis. So, every ten years we return to that  
10 watershed to resample. So, this cycle here on the right  
11 signifies that ten-year cycle.

12 So, the first part is the monitoring,  
13 which is done with MPCA and local partners to collect  
14 that information. That information is used to -- is  
15 used in the use designation determination or the Use  
16 Attainability Analysis that I was just describing.

17 So, the idea is that the monitoring  
18 data is sufficient to make those determinations in most  
19 cases. And what's important is that we determine which  
20 of these three tiers this stream belongs to because that  
21 then informs the assessment.

22 That is where the biological  
23 communities that were sampled are compared against the  
24 biological criteria that are assigned through the tiered  
25 uses.

1                   For waters that are determined not to  
2 be meeting those biological goals, that triggers the  
3 stressor identification to determine what stressors are  
4 causing that nonattainment.

5                   And then, from that comes the  
6 development of strategies to restore those communities,  
7 as well as strategies to protect the waters that are  
8 meeting or exceeding those goals and the implementation  
9 of activities to restore and protect streams and other  
10 waters. So, that's done on a ten-year cycle.

11                   Following that the watershed is  
12 resampled. And this is important because it provides  
13 feedback on the condition of the watershed, whether or  
14 not it's improving or, hopefully not, if it's declining,  
15 what strategies have been effective.

16                   But also, it's an opportunity to  
17 review the uses that were designated in the previous  
18 cycle to determine, for example, if a modified use  
19 should be redesignated as a general use or a general use  
20 as an exceptional use.

21                   As part of this rulemaking it  
22 includes the classification of 141 reaches as modified  
23 or exceptional use. And these are contained within  
24 SONAR Appendix A. This is a map that illustrates where  
25 these streams are.

1                   So, as part of the outreach that  
2 they've done for the Tiered Aquatic Life Uses framework,  
3 which stretches back eight years, more than eight years  
4 now, we've heard a lot of feedback from stakeholders.

5                   And this is an opportunity for me to  
6 lay out some of the questions that we've heard from  
7 stakeholders particularly seeking clarification as to  
8 what this rule does, what it means, what are the  
9 implications.

10                   So, first of all, it's not a change  
11 to Minnesota's definition of waters of the state. It  
12 doesn't change the waters to which water quality  
13 standards apply.

14                   So, for example, drainage ways, it  
15 doesn't expand biological criteria and assessment to  
16 drainage ways, they've been sampled and assessed for  
17 biology going back to 2002. So, this is simply a  
18 continuance of that framework.

19                   It's not a change to aquatic life use  
20 goals for lakes, ponds, wetlands, and other nonflowing  
21 waters. So, it doesn't affect lentic waters, which is a  
22 term for standing or still waters.

23                   It doesn't change any of the existing  
24 chemical or physical standards that are established in  
25 Minnesota Rule. It's not a shift from chemical

1 standards to biological criteria. Both are important,  
2 although it improves the capacities and the technical  
3 rigor of the biological criteria and their use and  
4 assessment.

5           It's not the rationale for the a  
6 priori relaxation of pollution controls or the removal  
7 of waters from the impaired waters list. So, it doesn't  
8 automatically move ditches into a modified use. It has  
9 to be demonstrated through a Use Attainability Analysis  
10 as required by the Clean Water Act.

11           And finally, it's not a mechanism for  
12 downgrading the existing beneficial use class of a water  
13 body. So, if it's demonstrating that the existing use  
14 for a ditch is the general use, then that is the  
15 existing use and it needs to be maintained.

16           So, what does TALU do? What is TALU?  
17 Well, first, it will provide more accurate designations  
18 for the biological potential for aquatic life in  
19 Minnesota streams. And it does this by providing more  
20 defined protections for high-quality waters and the  
21 aquatic life they support. That's the exceptional use.

22           It will set appropriate aquatic life  
23 goals for waters that are affected by legal, historical  
24 impacts, such as channelized streams. And that's the  
25 modified use.

1           It will provide a better defined and  
2 greater range of management options and resource  
3 planning. So, rather than having a single goal, there's  
4 now three tiers. It better balances the requirement and  
5 need to protect and restore aquatic resources while  
6 balancing important socio-economic needs.

7           It will provide more clarity in  
8 aquatic life standards. So, currently the standards are  
9 numeric standards and we use a narrative translator for  
10 those narrative biological standards.

11           These would put the biological --  
12 numeric biological criteria into the rule, along with  
13 the documentation of the indices of biological  
14 integrity, the biological criteria, for example.

15           And ultimately what this will result  
16 in is better protection and restoration outcomes for  
17 aquatic life and improved water quality in Minnesota  
18 streams.

19           There's a few other rule changes that  
20 are tangentially related to TALU, non-TALU related.  
21 This includes removal of Class 2C. This beneficial use  
22 is largely redundant with Class 2B. So, it's reasonably  
23 removed.

24           It's also an update to the formatting  
25 for Minnesota Rule 7050.0470. This is a part of the

1 rule that includes listing of waters -- listing of  
2 beneficial uses for waters.

3 Currently it only includes a subset  
4 of waters in the state. For example, it includes  
5 Class 1, Class 2A, Class 7 waters. It doesn't include  
6 most of the Class 2B waters.

7 The updated formatting breaks the --  
8 I should also note it only does this for streams, but it  
9 breaks them out by the eight-digit HUC watershed. So,  
10 the major watersheds in the state.

11 It lists all waters for which the  
12 MPCA has water body identification numbers for and  
13 provides that information. So, it links the 7050.0470  
14 rule to water quality management activities, which  
15 are -- basically use those water body IDs to track  
16 waters.

17 It will also provide information  
18 including whether or not a particular use is an existing  
19 use. So, currently the 2B waters we don't know if that  
20 water has been sampled and demonstrated that 2B is an  
21 existing use. So, now it will establish that  
22 information within the rule so that we know what the  
23 existing uses are.

24 So, as part of the development  
25 process for the Tiered Aquatic Life Use framework, the

1 MPCA has been involved in extensive outreach. This  
2 started back in January of 2009.

3 We had five informational meetings  
4 around the state to let stakeholders know that the MPCA  
5 was interested in pursuing a Tiered Aquatic Life Uses  
6 framework and to begin to get feedback from stakeholders  
7 as we shape the rule.

8 This was followed in February and  
9 March of 2009 with meetings with different sectors that  
10 would be potentially impacted by the TALU framework.

11 Again, the goal was to delve into  
12 specific issues that the stakeholders were interested in  
13 in order to get their feedback on the rule as we  
14 developed it.

15 In June, 2013 we had a web cast  
16 informational meeting, which corresponded to a document  
17 that described an implementation framework for the TALU  
18 rule. So, at this time we had many more details  
19 regarding what the rule would look like.

20 So, this again was an update to  
21 stakeholders and to get feedback before we began the  
22 drafting of the actual rule language. We presented at  
23 the MPCA Citizens Board in January, 2015.

24 We also presented at the MPCA Advisor  
25 Committee meeting in June of 2016. And this



1 corresponded to making the draft rule language  
2 available, which that was done December, 2015, but this  
3 was an opportunity to get feedback from stakeholders on  
4 the draft rule language.

5           And in addition to that in this  
6 eight-year period we've had numerous presentations at a  
7 variety of forums, basically anywhere anyone was  
8 interested in hearing about TALU or let me talk about  
9 TALU.

10           So, as part of the comment period  
11 before the hearing we received a number of comments.  
12 And I'd like to summarize some of these and also provide  
13 some responses from the MPCA on these.

14           We received comments supporting the  
15 TALU framework or the concept of the TALU framework. We  
16 received comments requesting some clarifications. These  
17 were generally neutral, but the commenters were seeking  
18 some information. And the MPCA responded to these  
19 direct commenters to this information.

20           We also got comments regarding the  
21 supporting documentation indicating that there was too  
22 much of it or it was too confusing.

23           And we acknowledge that the  
24 supporting documentation is extensive and it's complex,  
25 but this was done because the MPCA intended to document

1 the entire process, the entire biological monitoring  
2 program to make its science transparent.

3 In addition, recognizing the  
4 complexity, we provided layers of information. So, it  
5 started with a two-page fact sheet, a TALU overview,  
6 which was six pages long, it got into some of the  
7 implementation of the rule, the SONAR, which along with  
8 the requirements of the Administrative Procedures Act  
9 includes summaries of the technical support  
10 documentation and summaries of the framework, which then  
11 leads you into the extensive supporting documentation  
12 that supports the rule.

13 And with the exception of the SONAR  
14 these materials have been available on the TALU webpage  
15 for two to three years. And during our outreach the  
16 MPCA has always directed stakeholders to this webpage  
17 and this new documentation, particularly when new  
18 documentation was made available.

19 We received comments regarding the  
20 proposed designation -- the use designation information.  
21 So, that's the 141 that we're proposing.

22 Again, commenters indicated that they  
23 weren't able to make sense of some of the information  
24 that was provided. But the documentation that's  
25 provided in Appendix A of the SONAR is extensive and is

1 sufficient.

2 In addition, as part -- or follow-up  
3 from the Advisory Committee meeting in June of 2016 in  
4 response to one of the commenters and the Advisory  
5 Committee themselves, we made a draft list of these  
6 proposed changes available in June of 2016 for review.

7 We're also planning to develop a  
8 map-based tool, which should make this sort of  
9 information easier to access. And we'll use the  
10 comments that we received as part of this rule to design  
11 this rule.

12 We've heard concerns with whether or  
13 not we would be protecting existing uses, and in  
14 particular the modified use. The modified use does  
15 protect existing use and is not a downgrading of the  
16 water body, it's based on habitat limitation.

17 It's not based on the limitation by  
18 chemical pollutants. In addition, the chemical  
19 standards still apply independently to the modified use  
20 waters.

21 In addition, the modified use cannot  
22 result in the degradation of downstream waters. And  
23 this is in the Clean Water Act in 40CFR, 131.10(b),  
24 that's Exhibit S-2.

25 We also received comments requesting

1 clarification to the rule that we proposed. And the  
2 MPCA plans to modify or proposed modifications to the  
3 rule language based on some of these comments. And you  
4 can see these in hearing Exhibit L-5.

5 So, I'll run through some of these  
6 and group them by topic. So, we received comments  
7 requesting clarification that the existing chemical and  
8 physical standards still apply to the Tiered Aquatic  
9 Life Uses.

10 So, for example, in 7050.0221,  
11 Subpart 1, Items A, B, and C, we originally struck out  
12 Class 2A and replaced it with Class 2Ae or 2Ag, the TALU  
13 tier designators.

14 So, what we proposed to do is bring  
15 that 2A back in to make it clear that for waters that  
16 are designated just 2A, these would be lakes, these  
17 beneficial uses still apply, as well as the protections  
18 with them. Same sort of changes where the  
19 Class 2A was struck out, as well as 2B and 2Bd, those  
20 are unstruck out.

21 In addition, there's some additional  
22 language added to clarify that the water quality  
23 standards that are contained within 7050.0222 also apply  
24 to the TALU tiers 2Ae, 2Ag, for example, as well as the  
25 TALU tiers under 2Bd and 2B.

1                   We also received request to clarify  
2 that TALUs are only applicable to flowing waters. And  
3 to do that we proposed an additional definition under  
4 Minnesota Rule 7050.0150, Subpart 4. Lotic water means  
5 a flowing or moving water body, such as a stream, river  
6 or ditch.

7                   And then, in other parts of the rule  
8 at the bottom section of this edit indicates that these  
9 subclass designators only apply to lotic waters, so it  
10 clarifies where these TALUs apply.

11                   The preceding language to this that I  
12 just noted, this language refers to the previous  
13 clarification to clarify that the water quality  
14 standards apply to 2Ae and to 2Ag classes. Same changes  
15 to 2Bd and the same to 2B.

16                   This changes some headings in other  
17 sections to, again, clarify that these standards apply  
18 to lotic waters and not to lakes and other types of  
19 water bodies.

20                   Similar clarification in 7050.0430,  
21 unlisted waters. So, in order to make it clear that  
22 Class 2B waters are the default use for these unlisted  
23 waters and also clarifies that for lotic waters the  
24 additional designator of subclass designator "g" is  
25 added to those waters.

1                   We also received a request to  
2 clarify -- clarification to the description of the  
3 process that is used to designate modified uses. And  
4 that's in 7050.0222, Subpart 3c, as well as 4c. And  
5 this essentially brings this language more in line with  
6 the language in the Clean Water Act.

7                   And finally, we received a request to  
8 clarify where or what type of habitats the TALU  
9 biological criteria are applicable. In particular,  
10 whether or not the biological criteria would be applied  
11 to perennial waters.

12                   Within the SONAR, as well as one of  
13 the exhibits, we describe clearly that the biological  
14 criteria on the IBIs were developed to be applied to  
15 perennial systems or intermittent waters that allow for  
16 the colonization of fish and macroinvertebrates.

17                   And this language is added to  
18 7050.0222, Subparts 2D, 3D, 4D, to coincide with the  
19 biological criteria within these subparts.

20                   So, just to provide an overview of  
21 the rulemaking schedule, the request for comments began  
22 August 25 in 2014. The MPCA following that request for  
23 comment began drafting the rule language, as well as the  
24 statement of need and reasonableness.

25                   As part of this, the State made the

1 draft rule language available in December of 2015, which  
2 we used as part of a pre-proposal public engagement  
3 period in order to get feedback on the draft rule  
4 language, which this essentially occurred in December of  
5 2015 through September of 2016.

6 Corresponding to this we had a public  
7 informational meeting on the draft rule amendments at  
8 the MPCA Advisory Committee meeting in June of 2016,  
9 again, to get feedback on the draft rule.

10 The public comment period and our  
11 notice of intent to adopt the rules began on  
12 December 19th and ended on February 2nd at 4:30. The  
13 public hearing, that puts us where we are today,  
14 February 16th.

15 There will be a post-hearing comment.  
16 And I need to note that the dates that I have in this  
17 slide are not correct. That post-hearing comment period  
18 ends on March 17th. And post-hearing rebuttal period  
19 ends on the 24th of March.

20 So, that's the presentation I have.  
21 And I'd be happy to take any questions.

22 JUDGE MORTENSON: Before we get into  
23 questions and any other public comments, I'd like to  
24 give folks a brief stretch, break.

25 And if we can bring in the sign-in

1 sheets and I can see who's listed themselves as wanting  
2 to speak before we get into that. Why don't we  
3 reconvene in five minutes.

4 (At this time a brief recess was taken  
5 from 4:30 p.m. until 4:45 p.m.)

6 JUDGE MORTENSON: Just for point of  
7 clarification, if you have submitted comments they are  
8 part of the record now. And they're likely in Exhibit I  
9 somewhere. Correct?

10 MS. COLEMAN: Correct.

11 JUDGE MORTENSON: So, if you're here  
12 to testify about comments you submitted, please point  
13 out where in Exhibit I. I'll have your name and if you  
14 let me know that you did submit an exhibit. If you  
15 don't know which exact document it is, I'll find it.

16 If you brought written comments that  
17 you want to be part of the record that you haven't  
18 already submitted, I would appreciate it if you could  
19 provide that to me and if you've got a copy for the MPCA  
20 as well.

21 As I indicated earlier, I'm keeping  
22 the comment period open for 20 working days. I had some  
23 discussions with counsel for MPCA whether or not it's  
24 supposed to be 20 calendar days or 20 working days.

25 I'm going with 20 working days, that



1 benefits the public in general. The MPCA doesn't have  
2 any problem with that as well. Just so you're aware of  
3 that. That's why there was a discrepancy in  
4 Dr. Bouchard's presentation.

5 My office had told him 20 days and we  
6 confused working and calendar days. That's another  
7 example of why it's good for us to go through these  
8 rules before they become law so we know exactly --  
9 that's part of my job.

10 So, with that, I want -- as I  
11 indicated earlier, I want to start with the folks in our  
12 remote locations. And I've got a sign-in sheet from  
13 Detroit Lakes and I've got one person who's indicated  
14 they may be interested in speaking.

15 Detroit Lakes, can you hear me? And  
16 do you have someone there that's interested in speaking?  
17 Are we on two-way here? Detroit Lakes?

18 MR. OLSON: Yes, Detroit Lakes is  
19 here and ready.

20 JUDGE MORTENSON: Do you have anyone  
21 in the room who is interested in -- do they have  
22 questions or comments for me and the MPCA?

23 MR. OLSON: Yes, we have a person in  
24 the room that does have a question and may have a  
25 comment. His question was, during the presentation you

1 did touch on a map that the agency is proposing to  
2 classify 141 reaches to the modified or exceptional use.

3 And he's interested in those modified  
4 reaches that may be subject to TALU. And he's wondering  
5 if there is available a map on a much greater scale  
6 where he could go in and discern where those reaches  
7 were specifically. And maybe they exist in some of  
8 these exhibits, we weren't sure where that might be.

9 JUDGE MORTENSON: Is this  
10 Mr. Mattson?

11 MR. OLSON: Yes.

12 JUDGE MORTENSON: Willis Mattson and  
13 he's appearing on behalf of himself, correct?

14 MR. OLSON: Yes, correct.

15 JUDGE MORTENSON: Okay.

16 Dr. Bouchard, can you answer his question?

17 MR. BOUCHARD: Judge Mortenson, yeah,  
18 I can provide a quick answer to that. Within SONAR  
19 Appendix B there are 14 maps. So, the map of the state  
20 on a slide that the commenter refers to indicates  
21 there's 14 watersheds that are graded out.

22 There's a map for each of those  
23 provided in Appendix B in the SONAR, as well as  
24 descriptions of each of those individual reaches in  
25 Appendix A.

1 JUDGE MORTENSON: Does that answer  
2 the question?

3 MR. OLSON: It answers the question,  
4 but I'm not able to -- unless maybe the appendixes  
5 you're referring to, were those exhibits that were sent  
6 later as e-mails or would they have been part of that  
7 first group of binders that arrived here?

8 MS. COLEMAN: Judge Mortenson, we  
9 sent binders, similar to the ones you have and are  
10 available in this room, to each of the regional offices.  
11 And the appendices that Mr. Bouchard is referring to are  
12 two appendices to the SONAR.

13 The SONAR is Hearing Exhibit D and  
14 those appendices should be in one of the binders marked  
15 hearing exhibits, not one of the binders marked SONAR  
16 exhibits. And it should have a tab that has a D on it.

17 MR. OLSON: D as in dog or B as in  
18 boy?

19 MS. COLEMAN: Thank you for asking  
20 that to clarify. It's D as in dog.

21 MR. OLSON: Okay. I think we have  
22 found the exhibit and he's going to look through it now.

23 JUDGE MORTENSON: We don't have page  
24 numbers. It's near the back of that exhibit. It's  
25 probably the last, I don't know, a dozen or 20 pages.

1 MR. OLSON: We have found those  
2 individual -- yeah, I think they're watersheds or  
3 subwatersheds with the specific reaches. So, I think we  
4 have found them. Thank you very much.

5 JUDGE MORTENSON: All right. Are we  
6 satisfied in Detroit Lakes for purposes of comments or  
7 questions at this point?

8 MR. OLSON: Do you think you want to  
9 make any comments, Willis?

10 MR. MATTSON: No.

11 MR. OLSON: Okay. No comments at  
12 this point. Thank you.

13 JUDGE MORTENSON: Thank you. That  
14 moves us on to Duluth. I don't have -- no one is listed  
15 on the sign-in sheet that they wanted to speak in  
16 Duluth. Does anyone in Duluth have any questions or  
17 comments at this point?

18 MR. ESTABROOKS: No, not at this  
19 time, Judge.

20 JUDGE MORTENSON: All right. Good.  
21 So, for those of us here in St. Paul, I'm going to start  
22 with folks who marked on the sign-in sheet that they  
23 want to speak or comment. And then if there's anyone  
24 else you'll have a chance as well.

25 And you may have questions or

1 comments based on what you hear from folks who have  
2 spoken. So, I'm just going to go through the register  
3 in basically the chronological order, the order that the  
4 folks have signed up.

5 So, the first person I have here, if  
6 you want to move the microphone that would be fine,  
7 Randy Neprash. Am I pronouncing that, is that correct?

8 MR. NEPRASH: No, but no one gets  
9 Neprash.

10 JUDGE MORTENSON: So, I'm going to  
11 give you the opportunity to give your name for the  
12 record and your address and anyone you're representing  
13 and then please proceed.

14 MR. NEPRASH: My name is Randy  
15 Neprash, R-a-n-d-y, N-e-p-r-a-s-h. I'm representing an  
16 organization called the Minnesota Cities Stormwater  
17 Coalition.

18 Cities in Minnesota and throughout  
19 the United States have stormwater permits. About 170  
20 cities in the state of Minnesota have MS4 permits. And  
21 about 130 of them are members of the Minnesota Cities  
22 Stormwater Coalition. I am the coalition's staff.

23 My address, I work for a company  
24 called Stantec, S-t-a-n-t-e-c. Address is 2335 Highway  
25 36 West, St. Paul, Minnesota 55113. Is there any other

1 information I need to give you before I ask some  
2 questions?

3 JUDGE MORTENSON: Please proceed.

4 MR. NEPRASH: Okay. Thank you. So,  
5 my questions are, not surprisingly, from the perspective  
6 of permitted cities. One of the situations that we find  
7 ourselves concerned about is the possibility of a stream  
8 probably on the outskirts or edge of a regulated city,  
9 an area of a city that may not be developed now, but  
10 could be developed in the foreseeable future.

11 So, one set of questions regards the  
12 meaning of having such a stream changes to exceptional  
13 use status. My impression is that it would be somewhat  
14 similar, say, to a stream being designated as a trout  
15 stream.

16 That we could have a situation where  
17 a city would have to have a very specialized and --  
18 specialized set of local design standards that would  
19 need to be applied to the drainage area for such a  
20 stream that would be different from virtually every  
21 other part of the community.

22 Could you just speak a bit about how  
23 you see a change of designation to exceptional use  
24 affecting a city with an MS4 permit?

25 MR. BOUCHARD: Judge Mortenson, I can

1 provide an answer to that and also provide a  
2 comprehensive response to that in response to comments.  
3 As far as implementations -- and we discussed this  
4 within the SONAR, which is Exhibit D.

5 We don't expect there to be any  
6 changes to the stormwater permitting. For example,  
7 designating exceptional use waters as special waters,  
8 there's no proposal to do that.

9 The intention is to identify these as  
10 being exceptional and to make local partners aware of  
11 these waters and to plan accordingly. Because if they  
12 are degraded, then they become impaired and then we  
13 start thinking about how do we fix them, how do we bring  
14 them back into attainment.

15 So, it doesn't require local units of  
16 government to develop specific ordinances, but it  
17 requires them to think about how to protect those  
18 waters.

19 MR. NEPRASH: Interesting. So, it  
20 sounds as if -- if I understand what you're saying,  
21 there's no specific requirement that doesn't manifest  
22 itself through the permitting process, but it would --  
23 there would be a very high probability that if they did  
24 not have unusually high local design standards that the  
25 loss -- the damage to the IBI, reduction in the IBI

1 because of the impacts of development would also  
2 certainly result in the water being impaired and yet go  
3 through the TMDL process, dah, dah, dah, and maybe  
4 looking at restoration.

5 So, essentially, if I understand what  
6 you're saying, is there's no process -- in that  
7 situation there's no process for protection, but there's  
8 an almost inevitable degradation and restoration process  
9 that would be understood by all parties.

10 So, there's an implied protection.  
11 Is that a reasonable way to put that? It's an odd  
12 situation, it seems.

13 MR. BOUCHARD: Judge Mortenson, part  
14 of what we're looking at in terms of the biological  
15 program is how do we develop protection strategies, so  
16 the watershed restoration and protection strategies.

17 So, that information would be  
18 provided as part of that study to demonstrate these are  
19 exceptional uses and these are the sort of things that  
20 need to be done to maintain it. So that, infrastructure  
21 isn't created that then becomes a problem for that  
22 exceptional use.

23 Because once it becomes degraded,  
24 then now we're dealing with having to fix the  
25 infrastructure. It's easier and cheaper to fix it up



1 front than to try to fix it down the road.

2 MR. NEPRASH: I agree completely. I  
3 apologize, Judge Mortenson, I believe I was instructed  
4 that I should address my questions to you rather than  
5 conversing directly with the PCA staff?

6 JUDGE MORTENSON: You're fine.

7 MR. NEPRASH: Okay. Thank you. A  
8 related question, in a situation like that it seems that  
9 an appropriate question is, is there evidence -- are  
10 there demonstrated cases where in the guidance it's  
11 stated that almost all exceptional use streams are in  
12 areas with little human activity?

13 So, the question becomes, in the  
14 situation like I described, are there examples -- has it  
15 been demonstrated that it is possible to develop and  
16 urbanize a land area and still have the stream stay in  
17 the exceptional use and meet all the exceptional use  
18 biological criteria? Is there evidence that that can be  
19 done?

20 MR. BOUCHARD: Judge Mortenson,  
21 currently we don't have evidence as to how that would be  
22 done. Typically once you start putting in impervious  
23 surfaces it does become difficult to maintain those  
24 conditions.

25 It doesn't mean it's not feasible,

1 but this is part of becoming aware of these high-quality  
2 systems so we can develop those sort of techniques,  
3 methods, BMPs that will allow us, in cases where  
4 development is required, to maintain those exceptional  
5 uses.

6 MR. NEPRASH: Okay. Thank you. Two  
7 more questions, if I may?

8 JUDGE MORTENSON: Please.

9 MR. NEPRASH: Okay. As I look  
10 through the six-page overview document, one of the  
11 striking sentences -- or two of the striking sentences  
12 under modified use are that altered streams cannot be  
13 classified as modified use without going through  
14 rulemaking.

15 The process of classifying a stream  
16 as modified use requires a thorough analysis known as a  
17 Use Attainability Analysis.

18 In the section for exceptional use  
19 tier I didn't find any language that was similar. And  
20 what I found instead was quite different language.  
21 Exceptional use streams are designated based on the  
22 demonstrated attainment of exceptional use goals for  
23 both fish and macroinvertebrates.

24 So, the question essentially is, in  
25 the change -- potential change from general use to

1 either exceptional use or modified use, it's clear that  
2 a Use Attainability Analysis is necessary. To go to  
3 modified use it's not clear that that's the case for  
4 being changed to exceptional use.

5 So, the question is, what's the story  
6 there? And is a Use Attainability Analysis required in  
7 both directions?

8 MR. BOUCHARD: Judge Mortenson, I'll  
9 provide a complete response to this. There's a response  
10 within the SONAR, but it's very straightforward, both  
11 require rulemaking.

12 Although, you may not call the  
13 designation to an exceptional use exactly a UAA, as  
14 defined by the Clean Water Act, it is in a sense a Use  
15 Attainability Analysis to demonstrate that that is an  
16 attainable use.

17 MR. NEPRASH: Okay. Last question  
18 is, I find a lot of language in the guidance documents  
19 that I've made it through so far using the term  
20 "modified use streams." And then, that term seems to be  
21 associated particularly with judicial ditches.

22 In the real world of urban stormwater  
23 management we have -- ditches are such an interesting  
24 area of adventure. We have a bazillion ditches that we  
25 refer to as roadside ditches.

1                   So, they were never streams, they  
2 were simply part of the road construction, et cetera, et  
3 cetera. Of course, it's much more complicated than  
4 that.

5                   Is there a distinction in this rule  
6 between the approach toward modified use streams,  
7 ditches that once upon a time were streams or adjacent  
8 to streams, as distinguished from roadside ditches?

9                   MR. BOUCHARD: Judge Mortenson, there  
10 isn't a distinction as to the origin of the water,  
11 what's important is what is that water now.

12                  And if it is a constructed ditch that  
13 is capable of supporting aquatic life, meaning, it's  
14 sufficiently wetted for a long enough period of time to  
15 allow for colonization of fish and macroinvertebrates,  
16 then it would be covered by this.

17                  As I mentioned in the presentation,  
18 the IBIs and bio criteria are not applicable to femoral  
19 streams or ditches, which is probably what most of those  
20 roadside ditches would be.

21                  MR. NEPRASH: So, the distinction, if  
22 there is one, is implied in those other components of  
23 the definitions?

24                  MR. BOUCHARD: Yes.

25                  MR. NEPRASH: Okay. Thank you.

1 JUDGE MORTENSON: Were there any  
2 questions for Mr. Neprash? All right. Thank you very  
3 much.

4 MR. NEPRASH: Thank you.

5 JUDGE MORTENSON: Next we have  
6 Mr. John Lenczewski. Again, I'm sorry if I'm  
7 butchering. If you'll give us your name and spelling  
8 for the record and who you represent before you begin,  
9 that would be much appreciated.

10 MR. LENCZEWSKI: Thank you, Your  
11 Honor. My name is John Lenczewski, L-e-n-c-z-e-w-s-k-i.  
12 I'm here on behalf of Minnesota Trout Unlimited. I do  
13 have some written comments that I can provide a copy of,  
14 if that's all right?

15 JUDGE MORTENSON: Please. Are these  
16 the only copies?

17 MR. LENCZEWSKI: I do have more  
18 copies. You caught me off guard, I came in late and I  
19 didn't expect to be one of the early speakers. I do  
20 have another set.

21 JUDGE MORTENSON: If you've got a set  
22 for the MPCA that would be great.

23 MR. LENCZEWSKI: I don't really  
24 intend to read through all my comments. I previously  
25 had submitted another set of comments that is exhibit --

1 help me out here.

2 MS. COLEMAN: Judge Mortenson, those  
3 exhibits are I-15 and I-16.

4 JUDGE MORTENSON: Thank you.

5 MR. LENCZEWSKI: Thank you. So, Your  
6 Honor, I'm here on behalf of Minnesota Trout Unlimited.  
7 We are a group of -- grass roots group of citizens,  
8 several thousand members around the state. We work to  
9 protect, restore, and sustain cold water fisheries.

10 We like the concept of the tiered  
11 aquatic life system, but, of course, the details always  
12 need to be looked at closely. We really appreciate and  
13 agree with the concept of trying to give greater  
14 protections to those exceptional waters.

15 When the State set sort of the  
16 minimum standards, as we view it, the two-way standard,  
17 it's good to recognize that we have systems that are  
18 exceptional and we don't want those to degrade to  
19 something less. So, we applaud the development of the  
20 framework, but we do have a few concerns.

21 I'll try and highlight those, but I  
22 first want to explain and maybe I could point you to  
23 Page Number 3 of my comments dated today. I have a  
24 description there about fisheries.

25 Because the Clean Water Act and what

1 these rules are about, among other things, are  
2 protecting fisheries. And so, our concern is really  
3 focused around the fact that -- especially cold water  
4 fishery, two-way fisheries. The fish move and they have  
5 to move. And it's really an important part of the life  
6 cycle.

7                   They move between sections especially  
8 based upon temperature. Summertime stresses it's an  
9 important time, other than in the southeastern corner of  
10 the state, trout have to move to find the right  
11 temperature.

12                   And they may stay there for weeks or  
13 a month and then they disperse again and they utilize a  
14 much broader part of the system. They do the same at  
15 spawning time.

16                   They may utilize an area of the  
17 stream or tributary that has suitable spawning habitat  
18 that might not be available in the main body of the  
19 stream. But they'll use that seasonally and then  
20 they'll move back into the main river after spawning.

21                   They do the same thing in the winter,  
22 they'll move to downstream below what you consider your  
23 classic trout reaches to utilize wintering areas that  
24 tend to have more warm water tolerant species, those are  
25 the minnow species that really allow trout to sort of

1 put on weight for the winter. So, they'll utilize  
2 different areas of the stream depending on time of year,  
3 time of life cycle.

4 And our overall concern is that the  
5 process of regulating interconnected water bodies and  
6 stream systems is that we're a little concerned that  
7 we're chopping them up into too many pieces and saying  
8 one is a 2A and this is a 2B and we're going to have a  
9 lower standard for that.

10 Realizing that many times trout are  
11 utilizing those 2B reaches and they have to for the  
12 overall population to thrive. Because if you can't  
13 spawn, you can't thrive. If you die out in the summer  
14 because you can't get through a two-way reach to get to  
15 the cold springs the population takes a hit.

16 So, it's an important concept to keep  
17 in mind for cold water fisheries that these fisheries  
18 move, they have to move, it's a biological reality. And  
19 whatever framework we develop and regulation, we have to  
20 keep that in mind.

21 So, in my comments -- my first set of  
22 comments that are in the record I had sort of  
23 highlighted some of the concerns where it seemed that  
24 based upon some discussions we've had with staff in the  
25 past, they would come into some strange results where



1 some segments of a trout stream or a tributary might be  
2 a 2B -- might go from a 2A to a 2B and back to a 2A.

3 And we thought that didn't make  
4 sense, that we needed to protect the entire life cycle  
5 of the fish. So, my earlier set of comments address  
6 that.

7 And our concern is in this document,  
8 it seems to be somewhere in the guidance document, what  
9 are the assumptions and procedures used to -- that can  
10 lead to some of these strange results.

11 And we haven't been able to put our  
12 finger on it. We've asked staff to help us. We've had  
13 some assurances that this rulemaking is not going to  
14 entrench any criteria or assumptions that we couldn't  
15 work on sort of fixing that element.

16 We still have concerns that we  
17 haven't really been able to pin down where in the  
18 documents those sorts of assumptions or lack of  
19 acknowledgment of that biological reality that fish need  
20 to move, our concern that that be somehow addressed in  
21 the guidance documents. And we haven't been able to put  
22 our finger on it.

23 We also expressed concerns -- and  
24 again, I've got a set of comments from February 2nd,  
25 that the reclassifications were based only upon

1 available data. A lot of the data is very recent.

2 And our concern was that if the  
3 guidance document and the decision tree proposed to  
4 change some segments from 2A to 2B, we had strong  
5 concerns because it seemed to be a shifting on the  
6 agency burden sort of -- it got to sort of after you  
7 determine something might be impacted, then you  
8 eventually get to a use.

9 You ask the question, is it an  
10 existing use. And our position is that for 2A waters,  
11 which is not a default classification, but the State had  
12 to very affirmatively designate all these streams as 2A  
13 cold water, not the default 2B.

14 That we felt that that was an  
15 affirmative reasonable nonarbitrary decision by the  
16 State to say these are existing uses as cold water,  
17 that's why we're not leaving them as 2B waters.

18 These are existing uses, they're  
19 existing cold water systems, that's why we're going to  
20 give them a separate classification.

21 And our concern is that now four  
22 years later the agency may be looking at some of these  
23 saying, well, we don't have a lot of evidence today and  
24 maybe they're not doing so well today, so maybe we  
25 should make them 2B.

1                   So, we have a real concern. We think  
2 the State had good reason to give these a special  
3 classification, that's because they were an existing use  
4 they were trying to protect.

5                   So, now to the set of comments I gave  
6 you dated today, I'll just hit a couple of high points.  
7 One practical matter is the tables proposed, instead of  
8 using the current rule language, which lists all the 2A  
9 waters that now directs us to a table, we have concerns  
10 with that table.

11                   And probably the most significant is  
12 we've lost the reference to township range section.  
13 That is the system by which, say, the DNR regulates  
14 streams. It's a system by which other agencies or the  
15 dedicated fund staff people track progress to restore  
16 and protect these waters.

17                   So, we don't want to lose that  
18 township range section, that's how landowners think  
19 about their stream, they kind of know what section  
20 they're in. So, we think it's important to add columns  
21 back into those tables to include the township range  
22 section of each stream segment.

23                   We would also recommend adding the  
24 county or counties that those streams are in, that would  
25 be very helpful. Because townships change, so you want

1 to make sure you're in the right township. It's much  
2 easier for the public or landowner to identify which  
3 segment we're looking at.

4 In addition, we feel it's important  
5 in that table to provide some cross-reference to the  
6 neighboring segments, and ideally, their aquatic life  
7 use designation as well. So, you could tell at a glance  
8 is this segment immediately upstream or downstream of a  
9 2A water.

10 Another concern looking at the  
11 guidance documents is with the process for determining  
12 or making use designation decisions, both the watershed  
13 assessment team that has no stakeholders on that team  
14 and then there's a professional judgment group, also, I  
15 think, typically does not have many stakeholders.

16 I think there's typically an  
17 involvement by local government. But our concern is  
18 that stakeholders, such as trout anglers, let's say,  
19 it's not guaranteed that they're involved in that  
20 process until after a decision has been made.

21 We're going to change this  
22 classification from a 2A to a 2B. And the reality is  
23 the rulemaking process is not going to bring all that  
24 wealth of information that the professional judgment  
25 group looks at. And there's certainly going to be a lot

1 less time to go through it.

2 So, we don't feel the rulemaking  
3 process alone is a good substitute for involvement by  
4 stakeholders in that process.

5 So, we'd encourage the agency to  
6 think about in that guidance document including sort of  
7 more -- a guarantee of stakeholder involvement rather  
8 than leaving it to the discretion of the project manager  
9 to invite a certain group of stakeholders or not.

10 I guess the last major concern I'll  
11 talk about is it goes back to that fish movement. And  
12 that is that taking some of these 2B waters, which are  
13 the headwaters of the trout streams typically, how you  
14 treat those waters and the water quality coming down  
15 from the 2B segment into the 2A segment will have a huge  
16 impact on the quality of the 2A fishery.

17 And we are very concerned with any of  
18 these 2B segments that are the immediate headwater to a  
19 trout stream being downgraded to a modified use  
20 classification. Again, our concern about those fish  
21 utilize those reaches.

22 But another concern is that in the  
23 processes that local governments use to develop best  
24 management practices, typically they'll look at  
25 watersheds and develop a plan, there's the rap process

1 which the agency uses, which is the watershed  
2 restoration and protection strategies.

3 Our concern is that if these waters  
4 are given a modified use classification they will be  
5 viewed as something less important to protect. So,  
6 they'll have less stringent BMPs. They'll have less  
7 funding because their funding's running short. So, they  
8 prioritize funding, they've got a grid typically.

9 We believe there would be lower  
10 standards and fewer resources available to landowners in  
11 those areas to make improvements in nonpoint source  
12 pollution and land use practices, which will impact the  
13 quality, not just of that 2B section, but more  
14 importantly the downstream 2A section.

15 So, in a nutshell, we're opposed to  
16 any of the 2B segments immediately upstream of a trout  
17 stream being downgraded to modified use. That's  
18 probably where I'll leave that. I've got the written  
19 comments. I think you get the gist of it.

20 We're very concerned that we look at  
21 these 2A waters as -- the fishery is bigger than just  
22 typically the core trout area. And it needs to use  
23 those other areas and we need to account for that  
24 somehow in this process and be very cautious about  
25 downgrading those adjoining segments.

1 JUDGE MORTENSON: Thank you.  
2 Dr. Bouchard, can you address any of these questions or  
3 concerns? I'm particularly interested in the idea about  
4 the aquatic animals, fish moving and what he described  
5 as the breakup of a particular stream, for lack of a  
6 better term.

7 I know you've got other terms to  
8 describe this stuff that I'm not well versed in, but if  
9 I've got a fish whose life cycle spans the stream and  
10 there's different designations, how does that factor in  
11 to what you're proposing?

12 MR. BOUCHARD: Judge Mortenson, first  
13 of all, the Tiered Aquatic Life Use framework doesn't  
14 change the 2A and 2B designations, so warm water to cold  
15 water. So, it doesn't make a modification to basically  
16 changing what is now a trout water to a warm water  
17 stream.

18 So, what Mr. Lenczewski was talking  
19 about with a modified use that is upstream of a general  
20 use or exceptional use trout stream, because the  
21 modified use is based on habitat alterations in that  
22 system and not on water chemistry changes, things that  
23 could be exported downstream to that cold water stream,  
24 it's not expected to cause a degradation of it.

25 However, as part of the Clean Water

1 Act, and again, this is in 40CFR, 131.10, that's  
2 Exhibit S-2, the MPCA has to consider the protections of  
3 the downstream uses.

4 So, if there are conditions within  
5 that upstream that are causing the degradation of the  
6 loss of a downstream beneficial use, then that needs to  
7 be considered.

8 JUDGE MORTENSON: Is it common to  
9 have streams that are degraded upstream and exceptional  
10 downstream? Again, I'm not -- this isn't my area of  
11 expertise, but that sounds counterintuitive.

12 MR. BOUCHARD: Judge Mortenson, I  
13 would say that is uncommon. Mostly because if you have  
14 a watershed where you have degraded upstream conditions,  
15 the downstream conditions are also degraded to the point  
16 where they're not meeting the exceptional use.

17 So, when we see exceptional use  
18 streams they tend to be areas where the entire watershed  
19 is largely intact. However, we do find general use  
20 waters that are above exceptional use waters.

21 And it's possible there could be  
22 modified use waters as well, but it's because the entire  
23 watershed tends to be degraded, that's why you don't see  
24 much of this mixing and shifting from one TALU to  
25 another because the impacts to the system are more



1 systemwide.

2 JUDGE MORTENSON: Mr. Lenczewski,  
3 this situation that you're describing, is this a common  
4 situation or is this something your group is afraid  
5 might happen?

6 MR. LENCZEWSKI: Your Honor, we're  
7 aware of a few instances and we are working with PCA  
8 staff on that. But there are some instances where they  
9 were suggesting they wanted to maybe reclassify some 2B  
10 sections as 2A in kind of the manner I described, a  
11 segment of it or a branch of a stream.

12 JUDGE MORTENSON: That's  
13 downstream from a good -- because 2B is general use, 2A  
14 is exceptional.

15 MR. LENCZEWSKI: I'll say a general  
16 use to -- we only have 2As at this point, so this is all  
17 perspective. I would say that the streams that I'm  
18 talking about are not the top tier exceptional ones that  
19 we might be talking about making an exceptional 2A, but  
20 rather they're a general 2A.

21 They're a decent trout stream  
22 downstream. And part of that is driven by water where  
23 ground water enters the system. So, it can vary. You  
24 can vary from a stream that might be cold in one  
25 stretch, that might receive a tributary that warms it up

1 and then receives springs that get it cold again.

2 So, the temperature drives a lot of  
3 these. But the other things that affect sedimentation  
4 and the quality of the habitat, that can occur in very  
5 cold system versus a very warm one.

6 Our concern is more what we probably  
7 consider more a less than exceptional trout stream at  
8 this point. But those are precisely the ones that  
9 they've all been impacted and they're on the edge.

10 And frequently they're in parts of  
11 the state where we've lost most trout streams. So, it's  
12 pretty important to hang on to those. If we can reduce  
13 the degradation of the headwaters, it will have a  
14 beneficial impact downstream.

15 JUDGE MORTENSON: Are trout streams  
16 or trout -- and again, I'm exposing my ignorance here.  
17 Are trout native to Minnesota? I know we stock lakes  
18 and I know there's lakes we stock because people want to  
19 fish in them. Is that what we're dealing with trout?

20 MR. LENCZEWSKI: Your Honor, it  
21 varies. So, we do have two native species of trout and  
22 we also have a couple introduced species. So, it's a  
23 mixture.

24 And oftentimes what the State did was  
25 introduce the non-native fish precisely because the

1 habitat had been degraded.

2 It maybe had been a fantastic brook  
3 dropped stream, it was degraded to the point where they  
4 couldn't make it anymore and the DNR introduced brown  
5 trout because they're more tolerant of some of those  
6 conditions. So, that's not uncommon.

7 So, we have a mixture. I would say  
8 more and more the DNR is moving towards trying to  
9 reintroduce brook trout into a lot of these systems and  
10 having some good success with that.

11 Trout streams that were not trout  
12 streams, they were a hundred years ago, things got very  
13 bad and then in the last 20 years the DNR has realized,  
14 hey, there's been improvement with the watershed,  
15 everything looks good, let's reintroduce brook trout.  
16 And it's taken very well and now they have a wild  
17 population of brook trout again.

18 JUDGE MORTENSON: Okay. Was there  
19 anything else that you could provide in response to  
20 comments?

21 MR. BOUCHARD: Judge Mortenson, some  
22 of this is getting into site specific or stream specific  
23 questions as to what the attainable use should be. And  
24 I noticed in the comments that Mr. Lenczewski has  
25 provided there's questions about specific uses that are

1 being proposed.

2 So, we'll look forward to looking at  
3 these and responding to those and considering some of  
4 those specific comments, which is part of this process  
5 is to look at these specifically and determine if the  
6 proposed changes are needed and reasonable.

7 And in future rulemakings there will  
8 continue to be sort of these processes where we seek  
9 stakeholder engagement on specific use changes.

10 JUDGE MORTENSON: Does anyone,  
11 including folks in our remote locations, have questions  
12 for Mr. Lenczewski? All right. Thank you very much for  
13 your comment.

14 MR. LENCZEWSKI: Thank you.

15 JUDGE MORTENSON: Next I have Don  
16 Arnosti. Mr. Arnosti, hopefully you've paid attention  
17 to the instructions I've given. Are there any questions  
18 of me before you begin?

19 MR. ARNOSTI: No.

20 JUDGE MORTENSON: All right. Please  
21 proceed.

22 MR. ARNOSTI: My name is Don Arnosti.  
23 And you said it very well, Judge, A-r-n-o-s-t-i. I  
24 represent the Minnesota Division of the Izaak Walton  
25 League of America.

1                   And I'll spell that, if you like.  
2 Minnesota Division and then Izaak is I-z-a-a-k,  
3 W-a-l-t-o-n, League, L-e-a-g-u-e, of America. The  
4 address is 2233 University Avenue West, Suite 339,  
5 St. Paul, Minnesota 55114.

6                   I am the conservation program  
7 director for our organization. We're made up of  
8 outdoors people and people who love the environment.  
9 And I have to say, I have 30 years of experience working  
10 in a variety of conservation and environmental issues.  
11 This is a very difficult topic and a very dense one for  
12 me.

13                   We have one of our members who's  
14 going to be giving further questions and testimony  
15 later, Howard Markus, and he'll be able to dig in a  
16 little further.

17                   I wanted to give some broad thoughts  
18 and I had a few questions to ask. To the extent that we  
19 understand them, we do support much of this TALU  
20 rulemaking. We think tiered aquatic life approach is a  
21 good way to look beyond the chemistry in terms of what's  
22 happening in the streams and appreciate that.

23                   And particularly, the exceptional use  
24 category, as Mr. Lenczewski pointed out, gives us an  
25 opportunity to do a better job than present of

1 protecting some of our waters that are still closer to a  
2 natural state. And we appreciate that.

3 The focus of my comments, however,  
4 are on the modified designation, the lower standard.  
5 Dr. Bouchard said that standards are an intersection of  
6 science and policy or values.

7 And I would like to comment that the  
8 Pollution Control Agency is an expert at science and I  
9 do not believe their expertise extends to evaluating  
10 policies or values. I don't think that's their  
11 particular area.

12 I believe it is not reasonable to  
13 condemn altered natural water courses, and this is where  
14 we want to focus our comments, altered natural water  
15 courses otherwise known as streams that have been  
16 ditched.

17 So, they are subject to both being  
18 designated public waters because they are a stream, but  
19 they are also a ditch. And they have two statuses at  
20 once in law. And there's a collision between these laws  
21 constantly. And that is where policy and values come  
22 into play.

23 And I believe that the Pollution  
24 Control Agency is inappropriately coming down on one  
25 side of that collision between two bodies of law which

1 apply to a single stream. They're applying some policy  
2 and values that determine that the lower modified  
3 designation is appropriate.

4           And I'll go into a few of the reasons  
5 why I think they're making some judgments that are not  
6 reasonable and should not be made. They use a standard  
7 saying can the modified use -- so, they're describing  
8 these altered natural water courses for ditch, streams,  
9 can the modified use be reversed by proven restoration  
10 techniques.

11           Proven is a subjective statement and  
12 restoration techniques are constantly evolving. And it  
13 sort of locks into interpretation to current, call it,  
14 state of the art for mitigating some of the negative  
15 adverse consequences of ditching natural streams.

16           And there are techniques that are  
17 available today but not in widespread use, such as  
18 two-stage ditching and pretreatment of waters either in  
19 ditches or as it approaches ditches that can improve the  
20 habitat and the quality of the aquatic system in the  
21 ditch.

22           They also, in my view, arbitrarily  
23 use the five-year natural restoration benchmark to  
24 describe a threshold of when they might designate a  
25 stream to be modified. And I don't know where five

1 years came from.

2 Many of these ditch systems are  
3 periodically dug out or rehabilitated, but generally  
4 it's on a much longer time frame than that.

5 And many natural streams that have  
6 been ditched to the average person look like a natural  
7 stream because they often go 20 or 25 years in between  
8 maintenance. It's called maintenance when they dig it  
9 out again. So, I don't know where the five-year  
10 threshold came from.

11 And I think that's somewhat arbitrary  
12 to decide that that's the appropriate amount of natural  
13 rehabilitation time. And if the stream can't recover a  
14 certain amount of habitat after ditch maintenance, then  
15 it gets designated at this lower category of protection  
16 called modified.

17 I'm also objecting, I believe, if I'm  
18 understanding it correctly, they're only relying on the  
19 recent biological monitoring to determine the biological  
20 potential of these streams.

21 And while I believe that's probably  
22 quality and good information and accurate to describe  
23 the circumstances of the streams, that does not  
24 necessarily describe the potential monitoring that has  
25 been done in the last 10 or 20 years.



1                   What about, for example, pioneer  
2 records or DNR fisheries records, which extend many  
3 years back? Or as Mr. Lenczewski referenced, trout  
4 stream designations, which in some instances go back  
5 three or four decades.

6                   Again, there must have been some  
7 basis upon which those determinations were made. And  
8 they may not be reflected in the current biological  
9 situation because of degradation that's occurred. What  
10 we're afraid of is we're locking in impairments.

11                  We're -- by taking a natural water  
12 course that has been ditched, and perhaps it's been  
13 ditched for a hundred years even, but it still has quite  
14 a bit of biological function, by using these narrow  
15 bands to determine that it will be downgraded to lower  
16 standards of protection in the modified category, we're  
17 not really giving much of a chance to seek the  
18 improvements that could be applied, for instance, to  
19 upgrade the performance of the ditch to protect water  
20 quality and habitat or to develop those sorts of  
21 opportunities.

22                  The incentive has been removed  
23 because it's been lowered. I would presume that the  
24 Pollution Control Agency would award wastewater  
25 discharge permits that would be protected only at the

1 lower level and would not -- so, for instance, you may  
2 have wastewater that has to do with sediment or  
3 phosphorus or other things, which could result in  
4 biological impairment and change to the habitat.

5 So, I'm concerned that we're going to  
6 lock in poor water quality, which most of these natural  
7 water courses exhibit today.

8 My final comment is, I took a look at  
9 Slide 28 in Dr. Bouchard's presentation. And just as an  
10 example, of course, it wasn't a great scale, but it  
11 showed the Minnesota River in Mankato and Watonwan River  
12 sections with potential streams that would be classified  
13 as modified.

14 He made the point that these  
15 designations cannot contribute to the degradation of  
16 downstream waters. However, I'm having a difficult time  
17 getting my head wrapped around that because the entire  
18 Minnesota River watershed is impaired for multiple  
19 impairments.

20 And we are talking about known  
21 impaired waters that are discharging into a further  
22 impaired water. And I would just note at the end, I'm  
23 not a water quality scientist, but I've read pioneer  
24 records that indicate that the entire Minnesota River  
25 water system was a cold water trout fishery when the

1 pioneers showed up here.

2 So, to condemn it to a modified  
3 designation and say that it has no possibility to attain  
4 a higher quality water standard is locking in a hundred  
5 years of backsliding in water quality. And I think  
6 that's not reasonable. Thank you.

7 JUDGE MORTENSON: Mr. Bouchard, do  
8 you have any responses to the comments? And I'm  
9 particularly interested in this benchmark or the locking  
10 in. Didn't the Clean Water Act provide a benchmark from  
11 which we work from? I thought I heard you reference  
12 that at some point?

13 MR. BOUCHARD: Judge Mortenson, yes,  
14 the November 28, 1975 date is the existing use date.  
15 So, that's where we work from, in particular,  
16 determining what the existing use should be.

17 So, I can touch on some of the  
18 comments. For example, this is related to that date in  
19 regards to polling the recent biological monitoring data  
20 being used.

21 Any historical data that can  
22 demonstrate that existing use on or after that date is  
23 used. And that includes, for example, historical aerial  
24 images.

25 So, we've come across waters that are

1 ditches that were ditched after that date and they're  
2 not eligible for the modified use. They remain general  
3 use because the existing use was a general use before it  
4 was ditched. So, those are maintained.

5 In regards to the comment on the  
6 proven restoration actions, I think I'm in agreement for  
7 the most part in that it's not a fixed goal. I mean,  
8 the reason why it is somewhat vague is that these proven  
9 restoration actions will change.

10 So, it doesn't say these are the  
11 eligible actions. But, for example, the two-stage  
12 ditches, if they can be demonstrated that they are  
13 effective -- and from what I understand is that they may  
14 be effective in certain ditches, but not every ditch.

15 So, we need to understand where we  
16 can use them. And if it's the case where we think  
17 they'll be effective, we want to implement them.

18 In addition, part of our  
19 determination right now is, for example, if we have a  
20 ditch, let's say it's ten miles long -- pardon me, a  
21 stream reach that's ten miles long and most of it is  
22 unchannelized, it's natural, but we have a short quarter  
23 of a mile ditch reach within it and that's where we did  
24 our biological monitoring, those are typically not  
25 eligible for a modified use because that represents

1 something that's likely restorable because it's a  
2 relatively short ditch within an otherwise natural  
3 system.

4 In regards to the five-year recovery,  
5 this is largely based on intent, if this is a system  
6 where the landowner is demonstrating that this is  
7 something that will be routinely cleaned out.

8 However, in the case where you  
9 mentioned some of these do recover to a more natural  
10 condition, you get meandering, you get variability in  
11 the depth of the water, variability in the substrates  
12 that is sufficient to support the biological community,  
13 that's part of the Use Attainability Analysis.

14 When we go into ditches that have  
15 those features, they're not eligible for the modified  
16 use. When it has recovered and we monitor and  
17 demonstrate that the habitat is sufficient, then it  
18 remains a general use.

19 You also talked about wastewater  
20 permits. Those are based on the chemical standards.  
21 And we're not proposing to change the chemical  
22 standards. So, the wastewater permit isn't going to be  
23 impacted. I think that covers most of what you said, so  
24 that's all I have.

25 MR. ARNOSTI: May I ask something?

1 JUDGE MORTENSON: Go ahead.

2 MR. ARNOSTI: Judge Mortenson and  
3 Mr. Bouchard, it seems to me that the promulgation of  
4 these rules will set off a tremendous rush of clearing  
5 ditches. Because from what you described -- and I do  
6 have a fair amount of experience working out on the  
7 landscape.

8 And across Minnesota, of course,  
9 there's tens of thousands of miles of ditches, many of  
10 them in natural water courses, the ones that we're  
11 concerned about. The cleanout is haphazard.

12 Some ditch systems are cleaned out  
13 regularly, some have not been cleaned out since they  
14 were constructed more than a hundred years ago and many  
15 falling in between.

16 And it sounded like you were going to  
17 judge it based on what happened when you showed up. So,  
18 if, by chance, it was cleared out last year, it's going  
19 to look pretty altered, the habitat is going to be  
20 pretty impacted. And you might have decided we're going  
21 to downgrade this to a modified designation.

22 However, the next ditch over that is  
23 identical in most circumstances, but hasn't been cleared  
24 out in 25 years, you would go there, it's really the  
25 same situation, but it's not been cleared out. And you

1 would find a very healthy aquatic biota and you would  
2 keep the standard higher. Is that correct, that's how  
3 you would be evaluating things?

4 MR. BOUCHARD: Judge Mortenson, yes,  
5 that would be correct. We can't sample everywhere all  
6 the time. It's a large state and we have a lot of  
7 aquatic resources. So, it's based on the available  
8 evidence that we have to make these determinations.

9 It's based on the best determination  
10 that can be made using that information. It's just not  
11 feasible to be everywhere to collect that information.

12 MR. ARNOSTI: So, I guess I  
13 underscore my concern that we're going to establish a  
14 perverse incentive for people to rapidly go and clear  
15 out ditches where maybe they had no intention -- they  
16 have the right to do it, but maybe they had no intention  
17 to do it.

18 Because they have the opportunity to  
19 get their water course downgraded to lower water quality  
20 standards, which necessarily means less care in the  
21 future. I'm concerned about that.

22 MR. BOUCHARD: Judge Mortenson, I  
23 don't know how much of that -- it's expensive to clean  
24 out. And I would assume they're basing their cleanout  
25 schedule on when it needs to be cleaned out and not

1 trying to accelerate that cleanout and increasing their  
2 cost for cleaning out before they needed to in order to  
3 prevent a general use designation within their water.

4 JUDGE MORTENSON: This is rather  
5 fascinating, but we might be getting a little far afield  
6 from what I'm going to be getting into. I appreciate  
7 your comments.

8 But before I let you go, just so I  
9 get my brain around the bigger picture here, again, this  
10 isn't my area of expertise and I only know from what  
11 I've read in the papers, but wasn't a law put in place,  
12 and I don't know when it goes into effect, if it was,  
13 and I'm asking the two of you to correct me, about what  
14 I call filters, buffer zones?

15 You talked a lot about the Minnesota  
16 River. And we know all the industrial effluent that  
17 fills it up as it comes down here to St. Paul. If that  
18 was a recent law that was put in place for these  
19 ten-foot buffer strips, how does that impact what's  
20 going on in these rules?

21 Because I imagine all the effluent  
22 coming out of these fields going into these ditches,  
23 which are -- I've only learned now are really streams,  
24 can you kind of tie this together so I have a better  
25 understanding? Both of you, starting with you,



1 Dr. Bouchard.

2 MR. BOUCHARD: Judge Mortenson, yeah,  
3 this is important in part because of what the modified  
4 use means. The modified use isn't a relaxation of all  
5 controls within the system.

6 The biological criteria that are  
7 assigned to the modified use are based on a set of  
8 reference streams, essentially streams that have these  
9 buffers. So, these are the sort of BMPs that are needed  
10 within these systems to maintain them at least to the  
11 modified use.

12 The comment was made in regards to  
13 the slide of the proposed Tiered Aquatic Life Uses,  
14 Slide 28, I believe. There was a south fork of the Crow  
15 and Lower Minnesota River, there's a lot of modified  
16 uses within those watersheds.

17 Many of those are impaired even  
18 though they're modified use, which means they're  
19 impaired for a chemical impairment. So, there will be  
20 the TMDL to fix that.

21 Or they are impaired for the  
22 biological impairment, meaning that they don't even meet  
23 the modified use, which is going to trigger the stressor  
24 identification to determine why it's not meeting.

25 One of the elements could be chemical

1 pollutants that's the result of insufficient buffers.  
2 But just because it's designated as a modified use  
3 doesn't mean that it becomes ignored, it still has a  
4 goal assigned to it and is still subject to water  
5 quality management activities.

6 JUDGE MORTENSON: Thank you. Are you  
7 satisfied at this point?

8 MR. ARNOSTI: Yes. I don't disagree  
9 with what he said. I would simply add, Judge Mortenson,  
10 that the requirements of the new buffer law are for a 16  
11 and a half foot buffer on these systems.

12 And the science that lay behind that  
13 with a buffer, which was actually required decades ago  
14 for ditches whenever they underwent redetermination.

15 And the current law simply says get  
16 them all in by November 1st of this year. The science  
17 on that was really based on maintaining the ditch itself  
18 as opposed to improving habitat or water quality.

19 And that was sort of the minimal  
20 amount of permanent vegetative cover that was decided  
21 was appropriate to hold the banks, so that they wouldn't  
22 erode into the ditch.

23 So, the amount of improvement we're  
24 expecting, that's one of the things that's necessary to  
25 recover these streams, but it's far from sufficient in

1 all instances.

2 JUDGE MORTENSON: Thank you very  
3 much. Does anyone else in the room or in the remote  
4 locations have any questions for our witness? All  
5 right. Thank you very much.

6 MR. ARNOSTI: Thank you.

7 JUDGE MORTENSON: Mr. Arnosti  
8 referenced Mr. Markus. And I have one other witness  
9 before that, but for the sake of efficiency, if you have  
10 something to add, Mr. Markus, I'd like to take you out  
11 of order and take you next since you're with that  
12 organization. And if you'll go through the same  
13 procedure with your identification.

14 MR. MARKUS: I was assuming that my  
15 vocal testimony, oral testimony is the same as written  
16 for the record.

17 JUDGE MORTENSON: Did you already  
18 submit written?

19 MR. MARKUS: No.

20 JUDGE MORTENSON: Do you have  
21 written?

22 MR. MARKUS: No.

23 JUDGE MORTENSON: Okay.

24 MR. MARKUS: So, this counts?

25 JUDGE MORTENSON: It all counts. I'm

1 going to be going through it all again at some point.

2 MR. MARKUS: Okay. My name is  
3 Howard Markus, H-o-w-a-r-d, M-a-r-k-u-s. I live at 9175  
4 Pinehurst Road, P-i-n-e-h-u-r-s-t, Woodbury,  
5 W-o-o-d-b-u-r-y, Minnesota 55125.

6 I am a volunteer for the Minnesota  
7 Division of the Izaak Walton League of America. I have  
8 a Ph.D. in water resources. I'm a retired professional  
9 engineer. My area of expertise is aquatic ecology,  
10 especially in rivers. And my specialty is algae. So,  
11 I'm either a phycologist or algologist or something.

12 I did work for the Minnesota  
13 Pollution Control Agency from 1990 to 2013. I worked a  
14 lot with Dr. Bouchard while I was working at the agency.  
15 I'm going to go through some different areas of my  
16 expertise in light of what I'm going to say about the  
17 TALU rulemaking.

18 I've been involved -- when I worked  
19 for the agency I worked on a lot of different rulemaking  
20 efforts, wetland water quality standards, some of the  
21 biological rulemaking that went on in the 2000s.

22 Just recently the sediment revisions  
23 to the water quality standards, I worked on that until I  
24 retired. And those were subsequently approved.

25 I did a lot of work with total

1 maximum daily loads, TMDLs. I coordinated the mercury  
2 statewide TMDL, that was the first and probably the only  
3 TMDL of that sort. There is a New England regional TMDL  
4 that was based on that.

5 So -- also, I was the list  
6 coordinator for impaired waters for quite a number of  
7 years. So, I have a lot of experience in impaired  
8 waters. I did a lot of water quality modeling,  
9 including some pretty complex water quality models from  
10 EPA and the Corps of Engineers.

11 And I have lots of expertise in TALU,  
12 I worked on that on and off until I retired.  
13 Dr. Bouchard talked about a 2009, January road trip.  
14 And it was pretty cold, I think we had 36 below or more  
15 to Detroit Lakes, it was cool.

16 So, I have a lot of experience with  
17 TALU. So, I'm very familiar with a lot of different  
18 aspects of this. I have three or four comments that I  
19 wanted to make about this Tiered Aquatic Life Use  
20 rulemaking.

21 I want to direct you to Chapter  
22 7050.0140, Subpart 3, Chapter 2. To quote as best I  
23 can, "Aquatic life and recreation includes all waters of  
24 the state that support or may support fish and other  
25 aquatic life," and it goes on from there.

1                   I want to focus on the may support.  
2 The language is very explicit that this must include  
3 potential to support, not just is supporting. And I  
4 have to admit that I think most of what I've seen and  
5 read and worked on, I think that part is missing.

6                   And I think it's a major void. I  
7 think that basically when the agency goes out, it's  
8 what's there and not necessarily what could be there,  
9 what was there. And I have a real problem with ignoring  
10 an explicit part of the definition of what's required to  
11 do assessments.

12                   I'm aware at least when I worked  
13 there that there were some ditches that did meet water  
14 quality standards, did have good biological assessments.

15                   And as far as I'm concerned, if some  
16 ditches are presently meeting the IBI index of  
17 biological integrity, IBI goals, then I think the agency  
18 should assume that all ditches could potentially meet  
19 the same biological goals.

20                   I grew up in St. Louis, Missouri.  
21 The River des Peres was a concrete lined thing. I'm  
22 pretty sure -- with a little cutout thing in the middle  
23 for a little bit of trickle to flow through. I'm pretty  
24 sure those kind of things could not meet these goals.

25                   Because some ditches meet these goals

1 I think all have the potential. So, I don't think there  
2 should be any modified streams unless it is just  
3 impossible to restore. And I don't think any of these  
4 what I would call dirt lined, grass lined ditches are  
5 beyond restoration. So, I don't even think we should  
6 have a modified use.

7 As a biologist I think having  
8 exceptional uses is a very good idea, but I don't think  
9 we should downgrade these ditches because they're right  
10 now suffering from biological problems.

11 I don't think the agency has factored  
12 enough into the upstream pollution coming into these  
13 areas. If there's problems with excess nutrients, if  
14 there's problems with excess sediment, while we do use  
15 chemical analyses too, I don't think that part of it is  
16 factored in as well as it might.

17 So, I think it's unreasonable to  
18 assume that most of the ditches that are not meeting  
19 biologic goals can't meet them in a short time. I think  
20 they all potentially could.

21 As a secondary I am concerned about  
22 the non-TALU portion where they are modifying Chapter  
23 7050.0470, moving all or almost all the information into  
24 reference documents.

25 I sort of understand what they're

1 doing and I've sort of gotten a lesson on how it works,  
2 but right now the information in 0470 is put there  
3 through rulemaking. I'm concerned that once this  
4 information gets moved into a reference document through  
5 rulemaking that after that these documents will be  
6 outside the scope of rulemaking.

7           The agency can come in and decide  
8 we're not going to list trout streams anymore and would  
9 not need rulemaking anymore in these reference  
10 documents. And that may not be the case, these  
11 reference documents might require rulemaking to change  
12 them. I couldn't figure out whether that was explicitly  
13 stated or not.

14           So, I'm just stating a concern that  
15 if these escape rulemaking efforts after they're put  
16 into the reference document, I think that's a  
17 significant weakening of the ability of the public to  
18 have transparency about protecting important waters.  
19 So, I would really worry about that.

20           Because I've worked on impaired  
21 waters a lot and because I've worked in TALU a lot, I  
22 think it's important to state it's my opinion that a lot  
23 of what this is about is getting ditches to escape being  
24 listed as impaired. The reason is because what it takes  
25 to be impaired is lowered.



1                   So, it may take -- even though the  
2 population of the fish community is less or the  
3 macroinvertebrate community is less, once it becomes  
4 modified then it may no longer be determined to be  
5 impaired, where right now it would be.

6                   And I think in my view that this is  
7 aimed at not doing TMDLs, total maximum daily loads, on  
8 a set of ditches that probably are impaired, in my view,  
9 and should have restoration work done on them and  
10 restoration goals set on them.

11                   So, I think that it's a little  
12 disingenuous to say there's no change in the standards,  
13 no change in this, no change in that. I think where the  
14 change is going to be is in the number of impaired  
15 waters and the work done to restore them and the level  
16 needed to restore them. So, that's my view.

17                   If I'm not successful in getting rid  
18 of modified waters and we keep them, I would hope that  
19 it becomes explicit that you can't assign a modified use  
20 to waters upstream of impaired -- that waters are  
21 impaired for chemical reasons, excess sediment, excess  
22 nutrients, whatever reason.

23                   If there's an impaired water  
24 downstream or down downstream, then this modified use  
25 should not be put into effect because what's going to

1 happen is we're going -- we, working for the agency, the  
2 agency is going to do a TMDL, do a study, determine that  
3 the reason for the impaired waters is upstream stuff and  
4 then have to go back and unmodify the modified use  
5 because that's what it's going to take to restore the  
6 downstream or down downstream waters.

7                   So, I hope that up front it's  
8 explicitly required that these modified use designations  
9 can't be done for waters that are impaired for chemical  
10 reasons downstream.

11                   I do have one more thing, I almost  
12 forgot. Under the L.5 handout, in at least three places  
13 7050.0222, Subpart 2D, Subpart 3D, and Subpart 4D, where  
14 the language at the end is for colonization of fish and  
15 macroinvertebrates, and other places that I might have  
16 missed, I recommend that it be changed to fish and/or  
17 macroinvertebrates.

18                   Because there may be places where the  
19 macroinvertebrates are able to be healthy but there's  
20 just not any fish there. And I think it still needs to  
21 be protected for those macroinvertebrates, even if fish  
22 aren't there.

23                   And right now it reads like they both  
24 have to be there or neither one is protected. So, thank  
25 you. That's the end of my comments.

1 JUDGE MORTENSON: Dr. Bouchard, do  
2 you have any --

3 MR. BOUCHARD: Judge Mortenson, I can  
4 touch on a couple of those, but we'll respond fully in  
5 our response to comments. In regards to the  
6 modifications to 7050.0470, that the use changes could  
7 be made without a rulemaking, in order to make those  
8 changes, we have to undergo rulemaking.

9 So, once those tables are  
10 incorporated by reference, any changes can only be  
11 reflective of something that's gone through a  
12 rulemaking.

13 MR. MARKUS: Good, I couldn't tell.

14 MR. BOUCHARD: Where that is in the  
15 SONAR, it's probably mentioned ten times in the SONAR.  
16 I also appreciate the comment on the rule language and I  
17 think we'll consider that.

18 MR. MARKUS: Thank you.

19 JUDGE MORTENSON: Anyone else here or  
20 remotely have any questions?

21 MR. MARKUS: Thank you for the  
22 opportunity.

23 JUDGE MORTENSON: Thank you very much  
24 for your thoughts. We'll get back, then, to Ms. Maureen  
25 Johnson.

1 MS. JOHNSON: I have one copy here.  
2 I can send an electronic copy to the PCA.

3 JUDGE MORTENSON: You may proceed.  
4 Start with your identification.

5 MS. JOHNSON: Thank you, Judge. My  
6 name is Maureen Johnson, M-a-u-r-e-e-n, J-o-h-n-s-o-n.  
7 I am a biologist with 30 years of experience managing  
8 clean-ups of hazardous waste sites for the Minnesota  
9 Pollution Control Agency.

10 I do live at 6763 253rd Avenue  
11 Northeast, Stacy, Minnesota 55079. Did I miss anything  
12 here?

13 MS. JOHNSON: You're fine.

14 MS. JOHNSON: I worked in water  
15 quality analysis, water quality data verification and  
16 implementation of cooperative agreements for both U.S.  
17 Environmental Protection Agency and the U.S. Forest  
18 Service.

19 With my professional experience I  
20 have been interpreting and implementing the intent of  
21 numerous federal and state and environmental  
22 regulations. As a biologist I can appreciate all the  
23 work that has gone into this and say I wish I had been  
24 there.

25 But it seems that moving science into

1 rules has been a difficult thing to make clear to the  
2 public what needs to be done in words. I'm most  
3 familiar really with Northeast Minnesota. So, some of  
4 the examples in this talk will be from there.

5           First of all, I would like to offer  
6 an idea about the human disturbance score in the indices  
7 of biological integrity. There is an agricultural  
8 percent mining -- percent agricultural metric that is  
9 included in the human disturbance score metrics in the  
10 reference document, "Development of a Macroinvertebrate  
11 Based Index of Biological Integrity for Minnesota Rivers  
12 and Streams."

13           But there is no percent mining use.  
14 The lack of a percent mining metric makes the  
15 northeastern IBIs look much better than they are where  
16 mining is a major effect in the watersheds and  
17 ecosystems.

18           Mining areas will include many square  
19 miles of old and new pits, miles of waste rock piles,  
20 tailing basins, storage ponds, emergency basins and work  
21 in transit areas with drainage and overflows to wetlands  
22 and waters.

23           For example, one of Minntac's  
24 tailings basins alone is eight square miles and  
25 impossible to measure seeping leachate through the many

1 acres of wetlands that surround it.

2 It has severe effects on Dark River,  
3 which is downstream -- about a mile downstream,  
4 classified as a trout stream, and also impacts on Sandy  
5 River on the east side.

6 Both have likely had wild rice, but  
7 have very little wild rice, if any, left for many miles  
8 downstream and for many years to come.

9 In another area of the state natural  
10 gas development and demand for sand will continue. And  
11 the percent mining in the Southeast may also be  
12 essential for an accurate IBI locally.

13 On a lesser scale gravel mining pits,  
14 limestone mines and perhaps other types of mines can  
15 also add up across the landscape for local IBI systems.  
16 In summary, a percent mining metric should be added to  
17 the human disturbance score metrics.

18 The fish and macroinvertebrate IBIs  
19 should be recalculated for the Northeast and places  
20 where the mines are located, and BCGs recalibrated and  
21 proposed rules, bio criteria, would need revision. I  
22 think it would be a really significant difference once  
23 those are added in.

24 Another idea that I would like to put  
25 forward is about specific conductance. It's a

1 combination of chemicals effects measure that is  
2 included in the Class 4 classification in the Minnesota  
3 state rules, but has none in the Class 2B system of  
4 chemicals.

5 In one of the -- the EPA has a guide  
6 to the BCGs that came out in 2016, it was referenced in  
7 the SONAR, but I didn't see it referenced in the  
8 supporting incorporated documents. Some of the  
9 information that came out of there is really important  
10 to consider, I think.

11 One of the things that came with  
12 regard to specific conductance was a quote that I'd like  
13 to say. "In the future availability of improved  
14 tolerance value information can be used to refine the  
15 BCG and improve its precision." This was on Page 29 of  
16 the EPA's "Practitioner's Guide to Biological Condition  
17 Gradient."

18 I and a co-author provided MPCA and  
19 EPA regards to the specific conductance benchmark report  
20 in November, 2015. This report described the tolerance  
21 levels in a sub-ecoregion of Ecoregion 50 in Northeast  
22 Minnesota.

23 EPA verified our reports, conclusions  
24 in 2016 by conducting a parallel study with MPCA data  
25 that we did not use in our report. I would like to

1 suggest that the Minnesota index of biological integrity  
2 could include specific conductance as a metric with the  
3 ability to describe the ranges of native conditions and  
4 human disturbance.

5           Specific conductance has been used  
6 since MPCA began in 1965 as a parameter that indicates  
7 anthropologic change after natural conditions and  
8 natural changes have been accounted for.

9           Specific conductance is easy, fast,  
10 accurate, low cost, and has been a part of MPCA's  
11 sampling program since its inception. So, there's lots  
12 of quality specific conductance data to correlate with  
13 new tolerance data and IBI information.

14           So, I think a specific conductance  
15 metric should be considered to be added to the human  
16 disturbance score metrics. And we might need to  
17 recalculate all the things that I talked about before,  
18 too, and wind up with revised biocriteria.

19           In the situation that you decide not  
20 to use specific conductance as a metric, ecoregion or  
21 sub-ecoregion benchmarks for specific conductance should  
22 be employed to identify specific conductance impacted  
23 streams that do not comply with 7050.0217, Subpart 2A,  
24 the narrative that requires rules to protect no less  
25 than 95 percent of species or greater protection if



1 economically, recreationally or ecologically important  
2 species are very sensitive.

3 And waters impaired by specific  
4 conductance exceeding the benchmark then should be added  
5 to the 303(d) list. In addition, specific conductance  
6 benchmarks should be entered into the rulemaking process  
7 as region specific water quality standards.

8 Those may be outside of the TALU  
9 rulemaking process, but I wanted to say that and get it  
10 on the list of things to think about. Are there any  
11 questions about this particular subject?

12 On environmental justice, I just  
13 wanted to say a couple of short notes. The SONAR  
14 described the efforts it made to address the  
15 environmental justice issues, but it did not seek the  
16 advise of young PCA's own Environmental Justice Advisory  
17 Committee, which was formed in mid 2016. I think maybe  
18 that would be a good thing to do.

19 And with regard to public notice and  
20 environmental justice, changes, such as are in SONAR,  
21 Appendix A, should be subject to normal public notice  
22 and also public notice in the local area where the  
23 change is proposed, so that people concerned and  
24 knowledgeable about the area can provide crucial  
25 information to MPCA. This will help advance the goals

1 of environmental justice.

2 I'd just like to mention that the  
3 SONAR contained Appendix A. And Appendix A was not  
4 included in the proposed rules. So, in order to --  
5 Appendix A is actually part of the rules that were being  
6 proposed, but they weren't public noticed.

7 I don't know if they were even  
8 mentioned in the rules as a reference. So, I don't  
9 believe those were properly public noticed.

10 New subject, we talk about  
11 exceptional and general designations and the biologic  
12 condition gradient. I have a lot of notes here from all  
13 the documents that I read and they all seem to conflict.

14 Because one document talks in one  
15 part about the exceptional and general and modified  
16 being goals and another place they're talked about being  
17 whether the stream was attained or attained exceptional  
18 or modified or general.

19 Another one talks about how these  
20 comply with the Clean Water Act. So, I looked at the  
21 Clean Water Act. And the objective of the Clean Water  
22 Act is to restore and maintain the chemical, physical  
23 and biological integrity of the nation's waters.

24 And this is an objective. And it's  
25 to restore the integrity of the nation's waters. And I

1 note that we're talking about biological integrity and  
2 integrity here.

3                   There is also another section of the  
4 Clean Water Act that provides an interim goal.  
5 "Wherever attainable an interim goal of water quality,  
6 which provides for the protection and propagation of  
7 fish, shellfish and wildlife and provides for recreation  
8 in and on the water."

9                   But the EPA biocriteria document --  
10 I'm sorry, this is the incorporated biocriteria  
11 document, never mentions interim goals except with  
12 reference to this last goal from the Clean Water Act.

13                   And it doesn't specify where the  
14 aquatic goal criteria determined by thresholds in the  
15 BCGs and the biological control gradients are long term  
16 or interim.

17                   However, the SONAR states, "The  
18 exceptional use goal is consistent with the CWA  
19 objective to restore and maintain the chemical, physical  
20 and biological integrity of the nation's waters."

21                   And the general use goal, calling it  
22 a goal here, is equivalent to the CWA interim goal,  
23 which provides for protection and propagation of fish,  
24 shellfish, and wildlife.

25                   I would beg to differ that these are

1 natural correlations. The CWA says all nation's waters  
2 should have restoration and maintenance of their  
3 biological integrity. And it is not an interim  
4 requirement, that is the final ultimate objective of the  
5 Clean Water Act.

6 So, with these proposed rules,  
7 there's no plan to look forward to all waters meeting  
8 the final CWA objective. All we're doing is kind of  
9 keeping the status quo.

10 So, a system with a water designated  
11 G remain G forever. Where really if it's at the Level G  
12 in the biological condition, the BCG, that just reflects  
13 where it's at, it doesn't say where it's been or where  
14 it should be.

15 So, I really think that the rules  
16 need to reflect permanent CWA objective to restore and  
17 maintain the integrity of the nation's waters. I  
18 provided a lot of other places in my written comments  
19 where these conflicts arise.

20 So, putting all the documents  
21 together and trying to figure out how these things go  
22 into the rules, the process appears to be this: A  
23 stream has been sampled, its existing IBI determined,  
24 it's located in a level along the biological condition  
25 gradient, its location tells biologists whether it meets

1 the interim goal, which you indicate is at Level 4, or  
2 whether it meets the integrity objective of the Clean  
3 Water Act at Levels 1 and 2.

4 If a stream does not meet the interim  
5 CWA goal, it should be further evaluated, the stressor  
6 found and placed on the 303(d) list for the TMDL.

7 If a stream is capable of improvement  
8 to exceptional use, it should be designated as  
9 exceptional use in the first place so that appropriate  
10 improvements are required to be made by the responsible  
11 party to meet or come close to its original condition,  
12 which was exceptional use.

13 This is what was envisioned by the  
14 CWA, I think. If this process was envisioned in the  
15 proposed rules incorporated documents, it should be  
16 expressed in the proposed rules.

17 Otherwise, these rules are a jumble  
18 of documents that never come together. There's no  
19 description of how to connect everything and make  
20 everything come together and meet the objective of the  
21 Clean Water Act, which is where this all comes from.

22 One of the results of the rules --  
23 the proposed rules is the unlisted waters of the  
24 Boundary Waters Canoe Area wilderness and the Voyageurs  
25 National Park are designated as general use in 7050.0430

1 list of waters.

2 How can our most clean waters be  
3 designated as general use? Most of these are probably  
4 headwaters of the rivers -- the major rivers and streams  
5 that are listed. These waters have to be designated  
6 exceptional so if they're deficient, they can be  
7 restored to exceptional uses.

8 And then, they would be able to  
9 fulfill their status as federal wilderness and federal  
10 park and other state special designations.

11 In the general status, it would seem  
12 like any water flowing into them could be contaminated  
13 up to the general use level and they would also be  
14 subject -- these special waters would also be subject to  
15 pollution accidents and pollution not predicted by the  
16 environmental impact statements, but they will have to  
17 continue being receiving waters because jobs are at  
18 stake.

19 It's kind of a -- it's kind of a what  
20 is upstream is the reflection of what goes on  
21 downstream. And if you don't keep your upstream waters  
22 clean, your downstream waters are not going to be clean  
23 either.

24 So, there's no justification in the  
25 SONAR for labeling these unlisted waters in these

1 special places as general. Apparently there's no data  
2 or it would have been there.

3 The G designation is inconsistent  
4 with the qualities of these waters that comes to mind  
5 when Minnesota thinks about these special areas.

6 It's not only inconsistent, but it  
7 also inherently conflicts with the current 70 rules that  
8 designate exceptional waters, like high-quality waters,  
9 outstanding resource value waters, natural and  
10 scientific areas, and wild rivers.

11 And they have restricted and  
12 prohibited and antidegradation protections in 7050.0335  
13 in the antidegradation rules.

14 All of these waters, the BWCA, Lake  
15 Superior, waters that are designated special, Voyageurs  
16 National Park, scientific and natural areas, wild river  
17 segments, if these waters don't meet the exceptional  
18 biocriteria, they must be restored to their highest  
19 attainable level.

20 The forest service understands this  
21 and they're gradually removing some of the physical  
22 barriers that exist in the Boundary Waters Canoe Area  
23 wilderness. So, all waters should be protected for  
24 their potential restorability, rather than their  
25 existing condition.

1                   So, somewhere along the line our MPCA  
2 specialists need to figure out what is the past  
3 condition if it's not right -- if it's poor now.

4                   Similarly, unlisted state waters are  
5 listed as general. Most of these are likely to be  
6 upstream small headwaters and near or in wetlands.  
7 They're likely more undisturbed than downstream because  
8 physical limitations of use, such as low volume or  
9 messiness of a wetland.

10                  A stream is a reflection of what is  
11 upstream, plus it's own development. So, these are some  
12 of the problems that I see with the exceptional and  
13 general and modified designations.

14                  A slightly different subject, but  
15 closely related is that in the EPA's new guidance, "The  
16 Practitioner's Guide To Biological Condition Gradient,"  
17 they mention in a warning that biological conditions in  
18 a wilderness area would likely support a biological  
19 community close to natural condition.

20                  Using nonspecific ALU TALU  
21 classification with a single ALU threshold, a threshold  
22 might be set that would not protect the higher quality  
23 location. And I think that's what's happening here.

24                  MPCA seems to have fallen into this  
25 error in specifying the unprotected G, general,



1 designation for known wild and special areas of  
2 high-quality water. You set a single threshold,  
3 general, for the whole Boundary Waters Canoe Area  
4 wilderness except for those that were listed.

5 And these are nonspecific ALU  
6 classifications. They refer to a general area and not  
7 an ecoregion, not a watershed. So, I think these need  
8 to be revised seriously. That's all I'm going to say on  
9 that.

10 So, public notice, I think, needs to  
11 be a lot more special attention being taken. Every  
12 water that has a designation here needs to be public  
13 noticed to the water's locality so that people in the  
14 area can provide their opinions about the designation  
15 and may provide you some really valuable information  
16 that you didn't know about. So, I'll be ready for  
17 questions.

18 JUDGE MORTENSON: Ms. Coleman, can  
19 you first address the notice issue that she raised?

20 MS. COLEMAN: Judge Mortenson, I  
21 would be happy to. I do have one request. We have been  
22 going now for an additional almost two hours.

23 JUDGE MORTENSON: Yeah, we will take  
24 a break after we wrap up any questions about her. I  
25 want to give you both an opportunity while it's all

1 fresh to address if you have any comments or responses  
2 to her questions.

3 MS. COLEMAN: We may. So, in regards  
4 to the suggestion, if I understand it correctly from  
5 Ms. Johnson, that a public notice would be appropriate  
6 in the location of the brief designation from the  
7 current general use to either a modified use or an  
8 exceptional use, that would be in addition to the  
9 statutory public notice requirements for a rulemaking.

10 Because any re-designation from the  
11 current general use to modified or exceptional would be  
12 through a rulemaking. That's a suggestion that we will  
13 undertake -- that we will undertake review and respond  
14 to in our response to comment.

15 It is not a choice I can make at this  
16 point. But it is additional, if I understand it  
17 correctly.

18 MS. JOHNSON: I would like to clarify  
19 that I'm talking about the initial designations also.

20 JUDGE MORTENSON: The Appendix A in  
21 the SONAR you're referring to, correct?

22 MS. JOHNSON: Yes, and all the  
23 attached designated use tables.

24 JUDGE MORTENSON: And you're saying  
25 that was noticed appropriately pursuant to --

1 MS. COLEMAN: If the question, Your  
2 Honor, is whether or not the -- whether or not the  
3 Appendix A was appropriately noticed, the SONAR was  
4 published with the rule and the rule changes. The rule  
5 does reference those TALU designation changes.

6 It was appropriately noticed and we  
7 can provide details on when and how exactly it was  
8 published for those appropriately. I apologize that I  
9 did not understand the question initially.

10 JUDGE MORTENSON: Okay. The more  
11 substantive material, do you have any responses or  
12 comments, Dr. Bouchard?

13 MR. BOUCHARD: Yes, Judge Mortenson,  
14 Ms. Johnson provides a lot of technical detailed  
15 comments. So, rather than get into the weeds we will  
16 respond to those fully as part of our response to  
17 comments.

18 JUDGE MORTENSON: All right. It is  
19 6:30. I know I've got a couple more speakers and that  
20 might not be a short amount of time to get both of those  
21 in. So, why don't we take ten minutes to stretch. I  
22 know my court reporter needs to rest her fingers a  
23 little bit and then we'll reconvene at 20 to the hour.

24 (At this time a brief recess was taken  
25 from 6:30 until 6:40 p.m.)

1 JUDGE MORTENSON: All right, ladies  
2 and gentlemen, we've gone a little bit past my time.  
3 We'll keep things moving because it's getting late for  
4 everybody. Is there anyone outside waiting?

5 MR. MOLLOY: I'll check. No, looks  
6 like they all cleared.

7 JUDGE MORTENSON: All right. The  
8 next person I've got on the list who's indicated they  
9 wanted to speak is Mr. Bruce Johnson. Mr. Johnson?

10 MR. JOHNSON: Your Honor, my name is  
11 Bruce Johnson, B-r-u-c-e, J-o-h-n-s-o-n. I live at 6763  
12 253rd Avenue Northeast, Stacy, S-t-a-c-y, Minnesota. I  
13 do have some written comments here that I could provide.

14 JUDGE MORTENSON: Just one copy?

15 MR. JOHNSON: Yes. I'll try to  
16 shorten this up, I know it's getting late. I'm a  
17 retired biologist and chemist with over 30 years of  
18 experience in environmental matters.

19 I have worked for the U.S.  
20 Environmental Protection Agency. I worked for the state  
21 planning agency and the regional copper nickel study. I  
22 worked for the Minnesota Department of Natural Resources  
23 in both mining, pollution and research in that area.

24 I worked for the Pollution Control  
25 Agency, I was a team leader of the industrial

1 enforcement unit at the PCA. And I spent the last 15  
2 years as a supervisor at MnDOT that supervised all their  
3 cleanup and hazardous waste management.

4 I was a member of the Natural Academy  
5 of Sciences Transportation Research Board. I worked  
6 with the -- what they called a Umwelt Bundasamt,  
7 U-m-w-e-l-t, B-u-n-d-a-s-a-m-t, for the republic of  
8 Germany. Basically it's the German federal EPA. I  
9 worked for them for six weeks in Berlin.

10 I've done a number of papers  
11 recently. I co-authored an evaluation of field-based  
12 aquatic life benchmark for specific conductance in  
13 Northeast Minnesota, as Maureen had said earlier.

14 Basically what we were doing is  
15 looking at environmental impacts from specific  
16 conductance. Specific conductance is a way of passing  
17 electrical current through water and it measures the  
18 amount of ions in the water.

19 EPA has found that to be very  
20 indicative of impairing benthic invertebrates. So, the  
21 higher the specific conductance is, the more sensitive  
22 invertebrates are impaired.

23 We suggested at that time Northern  
24 Minnesota should -- a couple sub-ecoregions in Northern  
25 Minnesota have a specific conductance of around 300

1 micro siemens. The PCA's standard right now is 1,000.

2 EPA has done similar work in  
3 Appalachia. I used that work and compared it and then  
4 we gave our report to EPA. EPA Region 5 Chicago, they  
5 sent it to Cincinnati, the head of the research areas.  
6 They evaluated the report using Pollution Control Agency  
7 Data and found the report to be accurate.

8 So, our standard to protect benthic  
9 invertebrates, insects in the water, should be right --  
10 in Northeast Minnesota should be right in the area of  
11 320 is what EPA said.

12 The Clean Water Act objective is to  
13 restore and maintain chemical and physical and  
14 biological integrity of the nation's water. That's in  
15 the Clean Water Act, Section 101A.

16 Historically supporting goals like  
17 protecting aquatic life have been identified mainly  
18 through chemical analysis and laboratory bioassay.  
19 That's where you take an organism and you start putting  
20 a toxic into the organism, it's either like this or like  
21 this, so to speak.

22 Numerous federal indexes of  
23 biological integrity guidelines are designed to further  
24 protect water resources from degradation from the  
25 combined effects of chemicals, multiple factors, it's

1 called synergistic effect.

2 So, you might be under a specific  
3 limit for a chemical, but the combination of chemicals  
4 combined actually impact the benthic invertebrates and  
5 the other organisms in the water.

6 EPA basically wants to do not only  
7 chemical analysis of water, they want to do laboratory  
8 analysis of water and they want to do IBIs. And I fully  
9 agree with their approach. They set out guidance how to  
10 do this.

11 And according to the rules, states  
12 can modify their guidance as long as the modification is  
13 proven to be stronger than the guidance itself. In  
14 other words, they can't take EPA guidance and amalgamate  
15 it in such a way that it goes in their direction and  
16 doesn't do what the EPA wants it to do.

17 In reviewing this document, I find  
18 the IBI cited for benthic invertebrates contains  
19 insufficient sample numbers to develop an accurate  
20 biocriterion value for the entire state.

21 As a result, the current document  
22 allows surface waters to backslide rather than be  
23 protected. Let me give you an example. The IBI states  
24 for invertebrates, say, of 3,500 individual streams,  
25 invertebrate collection efforts representing more than

1 3,000 monitoring sites across the state.

2 When EPA looked at our report, they  
3 looked at the Northeast Ecoregion 3 and they took PCA's  
4 data and they had 2,668 samples and 2,542 locations in  
5 the northeastern, north central part of the state.

6 And when they did that, they called  
7 that sample modest for their calculations to verify our  
8 work. This would suggest that a modest number of  
9 samples for the State to develop biocriterion values for  
10 the entire state might be in the range of five to 6,000  
11 samples, not the 3,500 that the State has actually  
12 acquired. Sampling would likely require 10,000 samples  
13 to be accurate.

14 So, I believe, in summary, the above  
15 indicates that the data used to develop the draft TALU  
16 lacks physical relevance needed for a rule. This skews  
17 the biocriteria lower than the actual natural  
18 conditions.

19 As a result, it lowers biocriterion  
20 numbers as written ultimately. And this would amount to  
21 backsliding, which is illegal under EPA's guidance.

22 The current draft should not be used  
23 as a rule until further data is collected. And that the  
24 data includes the data for appropriate seasons. This  
25 was another comment that EPA made is PCA's data was



1 primarily collected in the fall. And that eliminates  
2 sensitive organisms that might be present in the spring.

3           Again, if we don't get that right,  
4 then whatever we do we're going to backslide and allow  
5 more contamination in these waters rather than less.

6           I have a problem how they're  
7 identifying taxons. In other words, you have an order,  
8 family, genus, and species level of criteria. So,  
9 there's a lot of families and family is a lot of genuses  
10 and genuses have a lot of species in them.

11           What happens when you look simply at  
12 conductivity, if you look at the family, a lot of the  
13 families in one place will have varying sensitivity to  
14 toxicants in the water.

15           So, you might have one part of the  
16 family very intolerant of toxicants and you have another  
17 part of the family that's tolerant of the same  
18 toxicants.

19           So, what EPA has recommended and the  
20 Scientific Review Board that has reviewed EPA's work has  
21 recommended that we use genus and species levels in  
22 order to identify sensitive species to be sensitive  
23 about what we're evaluating.

24           It was unclear on Page 13, footnotes  
25 say, "Most fish individuals is species. Whereas, fish

1 individuals were identified as species. Whereas, the  
2 taxonomic level identified for macroinvertebrates varies  
3 depending on the group.

4 "As a result, the macroinvertebrates  
5 identified at different levels, such as species, genus,  
6 family, order, depending on feasibility of identifying  
7 the organisms to the lowest level. To remain  
8 consistency, similar taxonomic resolution is used for  
9 taxons among samples."

10 What happens if you start mixing  
11 orders and species, you're mixing a bunch of people that  
12 are very tolerant with a bunch of people that are  
13 intolerant, it gets a mishmash. So, you don't get the  
14 accuracy you need to be protective of all the species  
15 involved.

16 When we wrote our paper, I evaluated  
17 species from -- that they say were very intolerant --  
18 EPA says was very intolerant from the Appalachian  
19 regions. And some of those species exist in Northeast  
20 Minnesota.

21 And I got data from the Forest  
22 Service and others and it demonstrated that those  
23 species were very intolerant of conductivity, let's say.  
24 And other species of the same family were very tolerant.  
25 Some of them varied from 200. They were intolerant at

1 the Level 200 with conductivity and others in the same  
2 family were tolerant to a thousand.

3 And what we have to do is we have to  
4 protect all the species. And that's why EPA is using  
5 this 95th percentile. You want 95 percent protected. I  
6 don't think the way this is written you're going to  
7 protect 95 percent of the species. And that, again,  
8 amounts to backsliding.

9 The current graph uses a  
10 watershed-based approach and fails to demonstrate using  
11 specific data how a watershed-based approach analysis is  
12 equal to or better than the EPA's guidance  
13 ecoregion-based approach.

14 An ecoregion-based approach, EPA has  
15 done this nationally, and they divided the nation up  
16 into regions and levels of regions. All these regions  
17 have specific characteristics as for the geochemistry of  
18 the area, the flows of the area, the soils of the area,  
19 this type of thing, it takes into account all of these.

20 We went to a watershed approach. And  
21 the watershed approach I don't think -- I can't see  
22 where it's demonstrated to be as good or as accurate as  
23 an ecoregion approach that EPA uses routinely in their  
24 guidance.

25 Now, we can go to -- what EPA further

1 says is that if you're doing an IBI and you're crossing  
2 ecoregions, you've got to be very, very, very careful.  
3 You can't just go blithering around and crossing an  
4 ecosystem and saying this is the same.

5 Well, the watershed crosses  
6 ecosystems. So, you're changing the geochemistry and  
7 the geology and everything else that comes through these  
8 ecosystems. I don't see where the agency has  
9 demonstrated that their approach to a watershed is going  
10 to be sensitive enough to actually protect very  
11 sensitive species.

12 Because if you average one upper  
13 watershed in one ecosystem with a lower ecosystem that  
14 has different characteristics, what you're going to do  
15 is you're going to somewhat lower the watershed that has  
16 the different characteristics and you're going to take  
17 the watershed that's cleaner and actually lower that  
18 down. Again, that's backsliding.

19 I think the other thing that I'm  
20 seeing in the 2016 draft of the 303(d) list of impaired  
21 waters, we report 4,607 waters are on that list. Of  
22 that list 1,260 sites are contaminated with mercury, 680  
23 sites do not require total mass daily load studies.

24 The remainder of 2,661 sites, EPA  
25 does require PCA to do a TMDL. MPCA is required to put

1 a study start date in years in TMDLs and a target end  
2 date. It's interesting to note that a huge number of  
3 these sites' target end date for setting up a TMDL is in  
4 2017, 2018, and 2019.

5 I'm concerned of some of the  
6 practicality of being able to do that, the agency's  
7 staff. We have -- for instance, we have permits at the  
8 agency NPDES, National Pollutant Elimination System,  
9 permits at the agency that haven't been renewed in 29  
10 years.

11 There's one permit that the company  
12 has been in operation for 29 years and has only been  
13 renewed once. No, I take that back, it hasn't been  
14 renewed at all in 29 years. They're just starting to  
15 renew it now.

16 How are we going to possibly  
17 physically do 2,600 sites in two or three years? So, I  
18 think what could happen here, given the lack of defense  
19 data, is that what we might end up doing is saying well,  
20 these streams, actually we've lowered down the standards  
21 and they actually meet these bioassessment criterias.  
22 So, we can take them off the list administratively.

23 I'm very, very much concerned myself  
24 with that. And that pretty much concludes my statement.

25 JUDGE MORTENSON: Thank you. Any

1 response or comments from the PCA?

2 MR. BOUCHARD: Judge Mortenson, I can  
3 provide a couple of responses, there's a lot of detail  
4 of comments there. In regards to the taxonomic  
5 resolution, the taxonomic resolution that the agency  
6 uses for samples is described in Exhibit S-65, cited in  
7 the SONAR in Appendix C.

8 And this lists the taxonomic groups  
9 and the resolution that's used. So, for most insects  
10 it's genus level. Although, I will say that the agency  
11 has shifted to start identifying these kind of species  
12 level when possible.

13 Most of the data that we collect now  
14 at least for many of the insects are for species level.  
15 But the intention that in the future once the data set  
16 is large enough, the IBIs can be revised again to  
17 incorporate this additional information.

18 But most of the taxa are genus level.  
19 Some of the taxa, for example, worms, aquatic worms,  
20 those aren't taken down to genus because the taxonomy is  
21 very difficult.

22 Also, a comment in regards to the  
23 watershed versus the ecoregion approach, the IBIs are  
24 developed based on ecoregions. So, they're combined.  
25 So, the IBI has taken into account several different

1 natural factors to create different models.

2 So, temperature, cold water versus  
3 warm water, gradient, region, so what part of the state  
4 you're in, as well as river size. So, larger is  
5 different than small streams.

6 The watershed approach is used as a  
7 way to structure the collection of data, so that we can  
8 collect a large amount of data within a watershed to  
9 understand what the impacts are and then develop the  
10 TMDLs more realistically for the entire watershed rather  
11 than doing one here and one there. So, that's the how  
12 the watershed versus ecoregion approaches are used by  
13 the MPCA.

14 MR. JOHNSON: It didn't mention  
15 anything about the ecoregion approach in the rule. It  
16 speaks to the watershed approach and people can  
17 determine that as anything they want practically. I  
18 worry about not being specific.

19 I worked in enforcement, I know what  
20 companies do and it isn't pretty. If they have a hole,  
21 they'll worm it around and argue that it's plus rather  
22 than minus. Even though you folks wanted to have it  
23 this way, it isn't specific enough to be that way.  
24 That's a problem.

25 MR. BOUCHARD: Judge Mortenson, the

1 documents S-64 and S-65 in the SONAR, those are the IBI  
2 documents. And that describes when you have a stream,  
3 which of the stream IBI models are used. So, if --

4 MS. COLEMAN: If I could just pause,  
5 Judge Mortenson, you seem to be looking for those SONAR  
6 exhibits and those are in the binders behind you.

7 JUDGE MORTENSON: All right. I'll  
8 look at them later.

9 MR. BOUCHARD: So, it essentially  
10 runs you through a dichotomous key. If you're in this  
11 part of the state, you're in the northern region, here's  
12 the stream this size. So, there's no ambiguity in  
13 regards to which of the stream models are used in  
14 determining the score.

15 MR. JOHNSON: I continue to worry.  
16 How are companies or citizens going to understand all  
17 this? I mean, we're supposed to write something that  
18 somebody is supposed to understand other than an expert  
19 in this field. And I really don't see that here. This  
20 is tough.

21 JUDGE MORTENSON: Okay.

22 MR. JOHNSON: And I've been 30 years  
23 in this business. Any time it's tough, there's a lot of  
24 place to have this thing wormed around in a direction we  
25 don't want it wormed around in.



1 MR. BOUCHARD: Judge Mortenson, it is  
2 technically complex and it does require an expert to  
3 understand some of the fine details of these models.  
4 But in order to develop a robust biological monitoring  
5 program, that's what required in order for it to be --

6 MR. JOHNSON: I question whether we  
7 have enough data in order to really come down and say  
8 where we're at. EPA took Ecoregion 30 from your data  
9 and said yeah, it was moderate. And we're taking a few  
10 more samples and spreading it out to the whole state.

11 I worry very much about the accuracy.  
12 And what we do if we aren't accurate, what ends up is  
13 you end up with not protecting the species that needs to  
14 be protected the most. It's really a concern.

15 And we have one river that is a trout  
16 stream. And downstream of it is a trout stream and  
17 there's been two million gallons a day of tailing waste  
18 going into it for 29 years. And we have yet to do  
19 anything about it.

20 JUDGE MORTENSON: Thank you very  
21 much, Mr. Johnson. We've got one more person on our  
22 list. If there's anyone has that has questions or  
23 comments after that we'll take those. But we'll proceed  
24 with Ms. Maccabee.

25 MS. MACCABEE: Thank you very much.

1 It's been great to have a chance to listen to everyone.  
2 I'm Paula Maccabee, P-a-u-l-a, M-a-c-c-a-b-e-e. And I'm  
3 the advocacy director and counsel for WaterLegacy, and  
4 that's one word, W-a-t-e-r-L-e-g-a-c-y.

5 And that's an environmental group,  
6 grass roots group involving a thousand members dedicated  
7 to preserving water quality in Minnesota. I will say  
8 that everything I've done on this project, however, has  
9 been pro bono. And that it is a very difficult set of  
10 rules to get through and took hundreds of hours.

11 My address is 1961 Selby Avenue in  
12 St. Paul, Minnesota. And my ZIP code is 55104. My  
13 written comments are in Exhibit I-9 or I.9, to help you  
14 find it, Your Honor.

15 JUDGE MORTENSON: Thank you.

16 MS. MACCABEE: I want to respond to  
17 some of the things that were said about the Clean Water  
18 Act today because I'm an attorney, I graduated from Yale  
19 Law School in 1981, which makes me quite old.

20 And for the past eight years most of  
21 the work I've been doing is with the Clean Water Act.  
22 So, some of the things people have said is not quite  
23 accurate.

24 First, although the rules here have  
25 to comply with the Clean Water Act, there's nothing in

1 the Clean Water Act that requires them to be written.  
2 The current rules existing in Minnesota have all been  
3 approved by the Environmental Protection Agency, EPA,  
4 under the Clean Water Act and valid.

5 And so, when we talk about is  
6 something legally authorized, these rules have to be at  
7 least as stringent as the Clean Water Act, but they  
8 could be more stringent.

9 So, in places in my comments, either  
10 in writing or verbally today, when I talk about it not  
11 complying with the Clean Water Act, what I'm saying is  
12 it's not as stringent as the standards there.

13 For example, there was -- I think  
14 maybe when Mr. Neprash was speaking earlier today who  
15 asked the question is there a Use Attainment Analysis in  
16 order to take a general water and say it's exceptional.  
17 And the answer is no. It's not maybe, it's no.

18 Under the Clean Water Act an analysis  
19 has to be done if you take away a beneficial use. So,  
20 if something is in the rule now and you want to make it  
21 lower or lesser, you have to go through a process of  
22 analysis. There is no such requirement if you discover  
23 that something is exceptional.

24 And also the term has been used a  
25 lot, the word "existing use." That's a strange term of

1 art because anything -- any quality of the water that  
2 has been there at any time since November 28, 1975 is  
3 "existing" under the Clean Water Act.

4 So, if I went to a stream today and  
5 it had an IBI that was only adequate, it was general,  
6 but I had grown up in Minnesota and I fished there as a  
7 kid and I knew that that had been an exceptional stream,  
8 that -- considering my life span, that water had ever  
9 been exceptional any time since November 28, 1975 should  
10 be considered exceptional.

11 And that's when Ms. Johnson was  
12 talking about the Boundary Waters and Voyageurs, that's  
13 a really important difference. It's well recognized  
14 that there are some streams in the Boundary Waters that  
15 today would not be measured as exceptional.

16 Some of them have been impacted by  
17 anthropogenic activities. I'm familiar with some of them  
18 have been impacted by mining. But that doesn't mean  
19 that this area was not designated because of exceptional  
20 use.

21 One more thing about the Clean Water  
22 Act and then I'll get to the details. There's a  
23 statement that really troubled me about the Tiered  
24 Aquatic Life Uses on the -- on Dr. Bouchard's  
25 presentation.

1                   That, "The Tiered Aquatic Life Uses  
2 one, two, three, four, five will better balance the  
3 requirement and need to protect and restore aquatic  
4 resources while balancing important socioeconomic  
5 needs."

6                   Water quality standards cannot be set  
7 to balance important socioeconomic needs. There are  
8 parts of the Clean Water Act, for example, the variance  
9 process or the setting of standards for waste water  
10 treatment, the technological standards that are intended  
11 to address socioeconomic needs.

12                  Water quality standards cannot be set  
13 to take into policy. And that's what Mr. Arnosti was  
14 talking about when he says that Dr. Bouchard is an  
15 expert in science, but not an expert in policy. Policy  
16 is not supposed to get mixed in with setting water  
17 quality standards.

18                  So, if what Dr. Markus was saying is  
19 correct, namely, that some of this push for modified  
20 uses is to take those ditches out of the impaired waters  
21 program for economic or socioeconomic reasons having to  
22 do with urban development or agriculture, it can't be  
23 done under the Clean Water Act. That is not  
24 appropriate.

25                  One other thing, I think there's a

1 little bit of confusion, and it comes up later in my  
2 comments, but I think we should talk about it. Why  
3 should it matter if something is called a modified use?

4 And Dr. Bouchard is correct, if there  
5 is a numeric standard, let's say a numeric standard for  
6 mercury or copper that's already in our rules, a water  
7 body could still be listed as impaired if it exceeded  
8 that number.

9 What both Mr. Bruce Johnson and  
10 Ms. Maureen Johnson were talking about is there are many  
11 standards for pollutants that aren't in our numeric  
12 rules. Specific conductivity is a very hugely important  
13 one.

14 And the PCA noted that high levels of  
15 sulfate and specific conductivity have been huge  
16 stressors resulting in low IBIs. Namely, waters that  
17 are supposed to be general, that are supposed to have  
18 good healthy diverse water insects, that would be  
19 invertebrates to the scientifically minded, and fish  
20 don't happen.

21 And the cause of these pollutants for  
22 which there are no numeric standards, the causes might  
23 be specific conductivity or might be sulfate or other  
24 causes.

25 Under the current system, if the

1 Pollution Control Agency did an assessment of Wyman  
2 Creek and found a low IBI and said that's due to  
3 specific conductivity or sulfate, it would be on the  
4 impaired waters list and it would come up and need to be  
5 restored.

6 If it were in, let's say, a part of  
7 the state where there had been some ditching, the water  
8 may still be bad for more than one reason, it may be the  
9 ditching, but there may also be nitrates, there may also  
10 be sulfates.

11 If there's no numbers that are being  
12 violated, if the Pollution Control Agency is saying if  
13 it's a ditch and it's got a low IBI, it's modified, that  
14 water would not be listed on the impaired waters list.

15 There would be no obligation to  
16 figure out why the fish and macroinvertebrates were in  
17 trouble and there would be no obligation to restore that  
18 water.

19 So, even though I think what  
20 Dr. Bouchard said, everything he said was accurate, what  
21 he didn't explain is why will this matter. What this  
22 will matter is there will be waters that today would be  
23 put on the impaired waters list and there would be an  
24 obligation to study them and fix them.

25 And if the modified use were in place

1 that would no longer be the case. And that's kind of  
2 the first point that I make in my comments. And that's  
3 the point that water shouldn't be downgraded to modified  
4 use if there's a contributing factor of a pollutant.

5 And the U.S. EPA and U.S. Geological  
6 Survey recently completed a draft technical report  
7 called "Protecting Aquatic Life From Effects Of  
8 Hydrologic Alteration." And that report was created in  
9 2015.

10 I'm not sure if the staff had a  
11 chance to look at it, but what the EPA says is that even  
12 if there has been ditching, even if there has been a  
13 hydrologic alteration, a water should still be listed on  
14 the impaired waters list even if the pollutant isn't  
15 identified, even if it's not violating the numeric  
16 standard, if that pollution might have contributed to  
17 the bad or low IBI.

18 So, I have drafted language that says  
19 that a modified use cannot be designated unless there's  
20 a finding that the low IBI did not result in whole or in  
21 part from a point source or nonpoint source pollutant.

22 So that, if the water impairment is  
23 attributed in any way to pollution, that that water  
24 would remain on the impaired waters list.

25 And that doesn't mean that you



1 completely reject modified use designations, but it  
2 means to make it a much more stringent test than was  
3 contemplated in these rules. And that language that I  
4 proposed is at the bottom of Page 4.

5           The other thing that the EPA and the  
6 U.S. Geologic Survey recommended, they took rules from  
7 states all over the country. And this is not something  
8 that's wrong with these rules, it's sort of a huge  
9 missed opportunity.

10           Here we are, we're preparing to  
11 propose to potentially lower the designation on  
12 literally thousands of waters in Minnesota. But there's  
13 nothing in this rule that says we don't want this to  
14 continue happening.

15           There are a number of other states --  
16 and I don't remember how many there are. My apologies,  
17 I should have counted how many there are.

18           But there's a number of other states,  
19 not only in the northwestern part of the country, the  
20 northeast part of the country, some in the south and  
21 some in the Midwest, actually have a provision of rules  
22 saying that if there's a change in the flow regime as a  
23 result of impollimants, dams, channelization, water  
24 withdrawal, point or nonpoints which discharges to  
25 surface water, there should be ensured a maintenance of

1 flow characteristics that ensure the full support of all  
2 uses and comply with all applicable water quality  
3 criteria.

4 And that's at the top of Page 5 of my  
5 comments. That's not that something is wrong with these  
6 rules, but if we're proposing the potential downgrading  
7 of so many waters, it seems important and reasonable to  
8 have something saying this is not going to continue  
9 happening in Minnesota without some effort to preserve  
10 existing uses.

11 My second point is actually the point  
12 that I feel the most strongly about from an emotional  
13 perspective. And that's that these proposed rules  
14 appear to result in a staggering downgrading of Class 2  
15 uses to modified uses. And that would be inconsistent  
16 with the Clean Water Act.

17 And I think it's also very  
18 problematic from a notice perspective. I know that  
19 Ms. Johnson asked for individual notice for the  
20 individual waters. And that might be more than what the  
21 State of Minnesota requires.

22 But I think the PCA skated really  
23 close to the edge in calling this an appropriate notice.  
24 Their notice was eight pages long. And on Page 5 of  
25 that notice it would state that 140 waters would be

1 designated.

2 If I were actually trying to notice  
3 up 109 waters that would be downgraded, I would put  
4 every single one of those waters and where they're  
5 located in my notice.

6 So that, if I lived next to a stream  
7 or a judicial ditch, my home is there or the place I  
8 fish is downstream of that, I would know, hey, wait a  
9 minute, they're doing something.

10 So, I'm not sure that the notice  
11 strictly violates the rules, but I think it was a notice  
12 that was completely opaque to citizens. And I know that  
13 I'm a professional, I've done this for years and years  
14 and I read lots of notices.

15 It was not until I was looking at  
16 this stuff for two weeks and had read several hundred  
17 pages that I stumbled into Appendix A and realized that  
18 not only was the PCA planning to change from 2A and 2B  
19 into their rules, but they were actually planning to use  
20 this rulemaking to take 109 waters and turn them into  
21 modified uses.

22 Now, I tried to let everybody know  
23 that I could think of, but appropriate notice would have  
24 looked different. I'm not saying this is illegal  
25 notice, but it seems like notice designed not to let

1 ordinary members of the public know what was going on.

2 I also took a lot of time reading  
3 Appendix A. And I'm really concerned that the way these  
4 rules are both written and applied, these downgraded  
5 waters do not approach the rigor of Use Attainment  
6 Analysis.

7 And I asked Dr. Bouchard, would these  
8 classifications become final based just on that  
9 paragraph in Appendix A. And he said yes. And I asked,  
10 "Is there another Use Attainment Analysis someplace else  
11 that I could read or spot check, at least read some of  
12 them?" And the answer was no.

13 And I quoted in my comments on  
14 Page 6, this is basically the same form language in  
15 every one of those modified use. "This reach has been  
16 altered for drainage and available evidence, EG aerial  
17 imagery, indicates that the reach was maintained for  
18 drainage before November 28, 1975.

19 "In addition, no evidence indicates  
20 that fish and macroinvertebrates shall attain the  
21 aquatic life use goal for general use on or after  
22 November 28, 1975."

23 Now, there's no information or  
24 evidence that they haven't. All there is is a picture  
25 that something was a ditch before 1975. And there's

1 basically no other evidence required.

2           And then, as I think it was commented  
3 by several people, "The poor habitat condition cannot be  
4 reversed at this time and is not likely to recover  
5 naturally, at least within that five-year period."

6           So, this is a really low standard.  
7 There's not an attempt to say, well, is pollution  
8 contributing to the low IBI. There's not an attempt to  
9 say, well, if we look back 30 or 40 years, were they  
10 doing better because maybe there hadn't been as much  
11 urban development or pollution or factory upstream.

12           And there's no attempt to say water  
13 body by water body, we looked at certain kinds of best  
14 management practices and analyzed them to see if the  
15 water could be restored.

16           So, even if it's appropriate to have  
17 some modified uses, I think we need to make sure that  
18 there's an individualized determination that general  
19 beneficial use was -- cannot be -- that it can't be  
20 preassumed just on the basis of the ditch existing or  
21 channelization existing that there was no existing  
22 general use at any time since 1975.

23           And that, there also has to be an  
24 individual determination that there is no restoration  
25 potential that is feasible.

1                   So, if these rules are going to go  
2 forward and there's going to be some provision for  
3 modified use, I think it's necessary to have an  
4 individualized determination.

5                   And then, also require that this  
6 modified use sunsets. There's nothing in these rules  
7 anywhere that suggests that once a stream is listed as a  
8 modified use it will ever, ever last or be restored to  
9 general use.

10                  And at the very least, if we're going  
11 to have modified uses, they shouldn't last more than  
12 five years. There should be a requirement of evaluating  
13 restoration at least that often.

14                  Now, I think it's hard to understand  
15 the scope. I think Dr. Markus gave a little sense of  
16 the scope of the problem. But this is from the SONAR,  
17 "That MPCA's analysis of streams in Minnesota determine  
18 that approximately 53 percent of stream miles are  
19 modified by humans either through channelization,  
20 channel creation or dams."

21                  Now, that means that 53 percent of  
22 our -- if you just took an aerial picture, you get close  
23 to half of our waters that might fail the test if they  
24 had a low IBI.

25                  And I don't know whether this was

1 representative or not, but PCA indicated that of the  
2 ones they studied in this batch of review, two-thirds of  
3 the channelized streams ended up being classified as  
4 modified use.

5                   So, the implications in terms of how  
6 many streams could be downgraded, particularly if we use  
7 the standard that all you need is a picture, that's a  
8 very, very significant change.

9                   And it's contained in the -- it's  
10 actually contained in a subsidiary document that the  
11 MPCA's development of biological criteria for Tiered  
12 Aquatic Life Uses, which I'm sure nobody else read  
13 except the folks who authored it, but in this  
14 preliminary assessment, only about 2 percent of the  
15 waters they assessed, which is about 1,733 waters  
16 comprising 12,472 stream miles, only about 2 percent  
17 were found to be exceptional, but 22 percent were  
18 assigned modified uses.

19                   That's a source of concern. Once  
20 again, I don't know how representative their selection  
21 is, a source of concern about how broad the implications  
22 might be of this downgrading.

23                   So, I guess my recommendations, I  
24 have recommendations to make the process of  
25 modification, modified use much more stringent. I also

1 believe that none of these 109 classifications are ready  
2 to be classified as modified use waters.

3 There's no individualized  
4 determination about whether there has been an existing  
5 use any time since 1975. There's no determination at  
6 all whether pollution, as well as channelization, could  
7 be contributing to the bad quality of the habitats. And  
8 there's no individualized determination on whether they  
9 can be restored.

10 So, that is on Page 8. And I would  
11 suggest that that portion of the rule be reserved at  
12 this time. And when additional individualized analysis  
13 is done, that any waters proposed to be designated as  
14 modified use be really clearly listed.

15 It's possible no one will come  
16 forward, no one will pay attention, but I don't think  
17 they had a chance this time around.

18 The next issue, and this is also an  
19 issue that was raised by both Mr. Arnosti and  
20 Ms. Johnson, is on the exceptional use side, I think  
21 there's a lot of support for using exceptional use  
22 designations.

23 On the exceptional use side, once  
24 again, we're not looking at whether those waters were  
25 exceptional at any time since 1975 or whether they had



1 the potential to be exceptional. It's only a snapshot  
2 at whatever moment in time the PCA gets around to that  
3 water and they do an IBI.

4 And I'm going to say first that I'm  
5 not a scientist. Although, I read hundreds of pages of  
6 those supporting documents. I don't feel like I can  
7 judge whether the IBI number is too high or too low.  
8 That's for the scientists.

9 But I can judge as an attorney and  
10 someone who's been using the Clean Water Act that it's  
11 just plain wrong to say today's spot and time in 2017,  
12 if this particular stream that's designated as a trout  
13 stream, this particular stream someplace in the Boundary  
14 Waters is nonexceptional, that that can conclusively  
15 determine that it was not exceptional any time since  
16 1975.

17 I think that Ms. Johnson's point is  
18 well taken, that waters on the Boundary Waters and  
19 Voyageurs should have the default designation of  
20 exceptional.

21 And I also believe that there should  
22 be an effort to try to identify for waters that are  
23 trout stream waters or waters that are adjacent to  
24 exceptional waters, whether they have been exceptional  
25 at any time since November 28, 1975.

1                   One more point I realize I didn't  
2 make with respect to modified waters, and this is  
3 related to what the Trout Unlimited folks had to say.  
4 And although the SONAR mentions that waters should be  
5 designated modified use based on looking also on the  
6 impacts downstream, there's nothing in the rule itself  
7 that says that.

8                   And I think that both before a water  
9 is degraded or declassified at a lower classification as  
10 modified use, the rules should require that there be an  
11 analysis of whether that lower classification would  
12 affect downstream waters.

13                   And I think that it is -- there is a  
14 great deal of mining in Northern Minnesota where streams  
15 are destroyed or rechannelized. Or actually the mines  
16 themselves change what was a headwater stream into  
17 basically a conduit for waste.

18                   So, those very headwater streams  
19 which would impact all the waters below could end up  
20 being modified uses. And I think it's important to make  
21 sure that that's not happening.

22                   And I haven't yet figured out how one  
23 could possibly consider -- the other point made by Trout  
24 Unlimited is how to classify waters that have the  
25 potential to be exceptional or that feed into

1 exceptional trout waters. That's something that I don't  
2 have language on and I'm going to look at.

3 Now, this next point, I think  
4 Mr. Johnson talked about -- a little bit about the  
5 nature of their cross references. I actually read all  
6 the documents that are cross-referenced in the rules.  
7 Some of them I skimmed through because I didn't  
8 understand them completely.

9 Although the revisor may favor  
10 incorporating a certain amount of guidance or procedures  
11 by reference, I don't think anyone realized that these  
12 were five documents comprising 318 pages.

13 So, for example, the question of  
14 which guidance is available in which stream, what should  
15 have been, in my opinion, is that someone at the PCA  
16 should have excerpted whatever the guidance they believe  
17 is and state it in clear and simple language.

18 I read many of these documents and  
19 what they are are scientific justifications for the  
20 methodology, they're not how to. They're sort of this  
21 is why we believe this methodology is legitimate.

22 And those are useful documents maybe  
23 as exhibits to the SONAR, but what I believe, and I've  
24 been practicing law for a long time and reading rules  
25 for at least 30 years, is that one needs to be able to

1 read the rule and now how to.

2 That's, I think, what Mr. Johnson is  
3 saying. If I'm a citizen and I'm worried about my  
4 stream or I'm a discharger and I want to know what test  
5 to do, I should be able to read the rule and it says,  
6 "See guidance to macroinvertebrates."

7 And I just click on the link and it  
8 says you have to do to species for these classes, maybe  
9 it's for ephemeral, other flies you have to go down to  
10 species, maybe for worms you only have to go down to  
11 genus. But it should be very simple to read what  
12 standard applies, what sampling is done.

13 I would have to say, nobody in  
14 reading this rule and trying to make sense of five  
15 documents and 318 pages would have any idea which IBI  
16 applies where, what kind of sampling needs to be done,  
17 how many and where and what kind.

18 I think the PCA probably knows what  
19 those rules are. I think that Dr. Bouchard would  
20 probably say, "Yeah, I know what needs to be done." But  
21 the rule doesn't say it, and it has to, otherwise it's  
22 not enforceable, it's not intelligible, it's not  
23 understandable.

24 And if somebody, whether it's a  
25 discharger or the agency, does an inadequate job of

1 sampling and comes up with a wrong conclusion, there  
2 will be no opportunity for review.

3 So, it's not within my expertise to  
4 say what those guidance are. I believe the Pollution  
5 Control Agency has the expertise, but they haven't taken  
6 the time to turn that into rulemaking.

7 And I would note that just as an  
8 example of how troubling this is, all the Appendix A,  
9 109 waters that are proposed to be reclassified as  
10 modified use, the whole purpose of this rule is to say  
11 they have to have certain levels of index of biological  
12 integrity scores that are low. That's the basis, how  
13 you get them to modify.

14 In Appendix A there wasn't one of  
15 those paragraphs that included the IBI score. All they  
16 said was that the habitat was poor or fair. Now, the  
17 rule has no criteria for whether habitats are poor or  
18 fair, other than I could conjecture.

19 So, there's 109 waters, they're  
20 proposed to be reclassified. They don't use the IBI  
21 score and they use this other standard of habitats being  
22 poor or fair, which is nowhere reflected in rule.

23 And that kind of completely  
24 unreviewable and unintelligible classification is a  
25 problem because the rules have not been correctly and

1 thoroughly written.

2                   So, what needs to be done here is  
3 probably not changing what the PCA does. What needs to  
4 be done is write what the PCA does in simple,  
5 intelligible language in the rule.

6                   And if you have the cross reference  
7 documents, guidance documents that would only be changed  
8 when the rules are changed, I think that's fine, as long  
9 as the guidance documents are simple prescriptive plain  
10 language, not 318 pages of why we think this is a good  
11 idea.

12                   And I put down in the rule language  
13 some of the methodology on Page 11 of my comments having  
14 to do with macroinvertebrates. The only reason I know  
15 about this is because I've been working with Mr. and  
16 Mrs. Johnson for three years on specific conductivity.

17                   I'm not saying that I know as a  
18 lawyer everything that could be included, but just  
19 looking at Appendix A and looking at those rules, no one  
20 reading this rule and clicking to the PCA site --  
21 incidentally, none of these documents were found by  
22 clicking, I had to Google search every single one.

23                   Nobody reading this rule and  
24 following the links would know how any of this process  
25 was done. And it can't be that way.

1                   Now, the next part, I had a bunch of  
2 what I consider more technical drafting issues. And I  
3 think the PCA proposed fixing most of them. The only  
4 one that I think still needs to be -- this was about by  
5 mistake by not having the Classes 2Be and 2Bg and 2Bm.

6                   Basically, there were whole classes  
7 of waters that would have no standards. And that was a  
8 technical drafting issue and I think it's been  
9 addressed.

10                   The only technical drafting issue  
11 which I'm still concerned is that the rule sections that  
12 use the term "aquatic life" and yet the definition of  
13 aquatic biota does not include aquatic life.

14                   So, you have one part of the rule  
15 that says we're going to define what we're doing by  
16 aquatic biota. And then we have Minnesota Rules at  
17 7050.0220, Subpart 1, for example, they use the words  
18 "aquatic life" and "habitat." And aquatic life is not  
19 defined.

20                   So, I proposed on Page 15 a way to  
21 fix that. And while doing so, this is something, I  
22 think, EPA has done in the federal register, but the  
23 Pollution Control Agency has never actually put in the  
24 rule just to say that when applied in connection with  
25 water quality standards, aquatic biota and aquatic life

1 also includes the consumption of fish and edible aquatic  
2 life by humans and wildlife.

3 The reason that's important, it's  
4 important, of course, for mercury. Our standards for  
5 mercury are set based on human consumption or the  
6 consumption at the top of the food chain.

7 But there are other toxic elements  
8 that the standard is set based on there's humans or  
9 loons or whatever else is at the top of the food chain  
10 consuming contaminated fish and macroinvertebrates. And  
11 it's just about time to fix that.

12 And then, this last issue, this is a  
13 geek issue, but it's an important one. I think the  
14 Pollution Control Agency doesn't realize how ordinary  
15 citizens look at listings.

16 The current listing in 070470 of a  
17 number of waters that are either 2A or wild rice waters,  
18 it doesn't look elegant in the rule book, but the normal  
19 person can find out whether the water they're concerned  
20 about is a trout stream or not.

21 I mean, all they have to do is pull  
22 it up on Google and hit find and see if their water is  
23 listed or they can look at all the 2A waters.

24 The way in which the Pollution  
25 Control Agency proposes to identify the waters is



1 completely impossible for anyone to search. There are  
2 80 different -- I think there were 80 documents, each of  
3 which had to be individually opened and searched on PDF.

4 There are also documents that are not  
5 based on anything that ordinary citizens are aware of.  
6 They're based on some subclassification of watersheds.

7 The easiest way to do this is to  
8 put -- if the PCA wants to put all the waters that have  
9 only default classifications in a great big huge  
10 spreadsheet, that's fine.

11 But what's really relevant for  
12 citizens, dischargers, environmental groups are what are  
13 the waters that have been designated as something,  
14 whether it's designated exceptional, whether it's  
15 designated as a trout stream, designated by who.

16 And those should all be in one  
17 searchable spreadsheet, similar to the impaired waters  
18 list, where you can search by county, by name of the  
19 water body, by watershed if you want, and it has  
20 township and range information.

21 So that, people can go in and figure  
22 out the water I'm caring about, I know how to find it, I  
23 go to a link. And the link doesn't send me to the front  
24 page of the PCA website, which is what happened now in  
25 the rule, but the link actually sends me to the document

1 that's incorporated by reference.

2 And it's one searchable document that  
3 I can read. And I'm sure that there's a technological  
4 capacity to do this, so that it would actually be an  
5 improvement over having everything written out by the  
6 revisor.

7 The way it is now, it is completely  
8 opaque. There would be no way -- and I actually tried  
9 to find waters and I couldn't do it. And I sort of  
10 knew, well, it's in the St. Louis River Watershed, I  
11 still couldn't find them. So, this system has to be  
12 changed.

13 I'm not saying that PCA has to drop  
14 the idea of having the spreadsheet instead of putting it  
15 in the rule, but that needs to be a consultation process  
16 with stakeholders who represent citizens and work with  
17 citizens. And it needs to be sortable and intelligible.

18 Finally, if we're going to any  
19 documents that are not in the rule, there needs to be a  
20 statement in the rule that this spreadsheet or this  
21 guidance or this listing cannot be changed except by  
22 rule.

23 I understand Dr. Bouchard is sincere  
24 in saying it shouldn't be or won't be, but no one seven  
25 years from now or even probably six months from now will

1 remember what's in the SONAR, that they'll all be able  
2 to look up what's on the rule.

3           So, if there are documents that PCA  
4 thinks just from a writing standpoint shouldn't be in  
5 the text of the rule, they need to be in a spreadsheet  
6 or a guidance. The rule should say this document, which  
7 cannot be changed other than by rule, is an act. And  
8 then provide it directly.

9           That way you have all the benefits of  
10 accountability, any benefit of not having a whole bunch  
11 of pages in the rule and making it inconvenient for the  
12 revisor.

13           So, I believe there's some really  
14 good intentions in this rule. I have some concerns,  
15 though, about the way in which modified use waters would  
16 be used to excuse the lack of restoration or lock in  
17 some of the bad practices that all of us have had in  
18 Minnesota over the last 50 years.

19           I also believe even where the  
20 intention is really good, the rule drafting needs a lot  
21 of work. And I will say that I have not been at the  
22 table for any of this. So, it's not because the PCA  
23 hasn't reached out. It's because all of us here are  
24 volunteers and we just have not had the time or the  
25 resources.

1                   So, sometimes the stakeholders who  
2 need to be heard come in very late in the process. And  
3 that's not your fault, but it is an economic reality  
4 that uncompensated time tends to be gathered together on  
5 the nights and weekends when it gets close to the wire.

6                   So, I'd be happy to answer any  
7 questions. And thank you very much for your work and  
8 your time.

9                   JUDGE MORTENSON: Thank you. Any  
10 responsive comments or questions?

11                   MS. COLEMAN: Sure. Thank you,  
12 Ms. Maccabee and Judge Mortenson. We have received  
13 Ms. Maccabee's comments as she reflected them here today  
14 and summarized them here today. We greatly appreciate  
15 the specific language change recommendations and we  
16 absolutely will be responding to them in our response to  
17 comments.

18                   But I just wanted to mention that  
19 before I give the opportunity for Mr. Bouchard to answer  
20 any specific topics that he wishes to.

21                   MR. BOUCHARD: Judge Mortenson,  
22 there's a lot of information there. I don't know if we  
23 need to go through any of these now. Like Ms. Coleman  
24 said, we'll respond to these comprehensively in response  
25 to comments, unless you have any specific comments you'd

1 like us to address now.

2 JUDGE MORTENSON: No, I just wanted  
3 you to have a chance. I did note one question that --  
4 you made a comment in the questions for MPCA about the  
5 analysis -- the analysis, I guess, that goes into making  
6 reclassifications for channelized or ditches.

7 Is channelization or ditching the  
8 criteria for making a reclassification? I got a little  
9 confused about -- I know they were your comments, but it  
10 was about your process. So, my question is directed to  
11 you.

12 MR. BOUCHARD: Yes, Judge Mortenson,  
13 there's a number of requirements which is described in  
14 the SONAR and in the presentation I gave earlier.

15 Channelization or human caused  
16 alteration to the stream or water body is one of the  
17 requirements, in addition to many others, including the  
18 limiting habitat, the biology not meeting the goals, the  
19 existing use not being general use or a Class 2B and so  
20 forth.

21 So, channelization is just one small  
22 part of the question. It takes a lot more than just  
23 being a channelized stream in order for it to get into  
24 the modified use.

25 JUDGE MORTENSON: Obviously

1 channelization or turning a creek into a ditch does  
2 eliminate habitat and changes the existing use.

3 So, are there criteria based on the  
4 chemistry, temperature, all the other -- again, I'm out  
5 of my bailiwick here, but based on what I've heard  
6 tonight, those were other factors that seemed to be  
7 important.

8 MS. COLEMAN: Judge Mortenson, I'll  
9 let Mr. Bouchard talk to those other factors, but just  
10 to be clear, that the channelization must have occurred  
11 prior to November 28, 1975.

12 JUDGE MORTENSON: Right.

13 MR. BOUCHARD: Judge Mortenson, you  
14 mentioned the habitat. So, we have ditches in the state  
15 that have actually quite good habitat. This is one of  
16 the things that after studying these systems is that  
17 they're very diversified.

18 And some of them can meet the general  
19 use, they do meet the general use or they have habitat  
20 that indicates they should be able to. And as a result,  
21 they're not eligible for a modified use.

22 Whereas, other systems, they don't  
23 appear to be feasibly attainable based on the  
24 information that we've collected because they're  
25 maintained for drainage. And the intention is to

1 continue maintaining them for drainage and since  
2 eliminating the habitat.

3 We see differences also in how  
4 quickly they recover from being channelized. Some of  
5 them may recover quite quickly and those would be more  
6 likely to end up in general use.

7 JUDGE MORTENSON: I may have been  
8 misinterpreting what I might have heard earlier, that's  
9 why I'm asking these questions. We're not talking about  
10 if something is channelized or something is ditched it  
11 automatically gets a particular --

12 MR. BOUCHARD: Judge Mortenson,  
13 absolutely not.

14 JUDGE MORTENSON: All right. Yeah.

15 MS. MACCABEE: Judge Mortenson, a  
16 couple of things. If you look at the chart that's the  
17 pre-chart with the circles, what you see is there's  
18 nothing in there asking whether there's a pollutant that  
19 also contributed to the low biological score.

20 JUDGE MORTENSON: Chart from the  
21 presentation?

22 MS. MACCABEE: From the presentation,  
23 which is also contained in the SONAR. There's also  
24 nothing in this chart that looks at whether at any time  
25 after 1975 there was a higher index of biological

1 integrity.

2 If you look at those paragraphs in  
3 Appendix A, which is -- maybe this is a question for  
4 Dr. Bouchard, why aren't there any IBI numbers in the  
5 Appendix A?

6 MR. BOUCHARD: Judge Mortenson, I can  
7 quickly answer the question with regard to the IBI  
8 numbers in Appendix A. In order to make the information  
9 in Appendix A usable, there's a coding system.

10 So, underneath in the table, for  
11 example, there's an IBI column. And it will have -- the  
12 best thing to do is point to the key at the beginning of  
13 Appendix A.

14 Appendix A on Page 10, Table A4  
15 provides -- so, the first half of that table. So, for  
16 example, the blue block that's above exceptional use,  
17 plus, plus, that's the coding that's used within the  
18 tables in the preceding pages.

19 So, if the IBI, for example,  
20 exceptional uses, you'll notice toward the middle,  
21 they're all plus pluses because they exceed the  
22 exceptional use.

23 The green means the IBI score fell  
24 between the exceptional and the general use. The yellow  
25 means it fell between the modified and general use. The



1 red means that the IBI score fell below the modified  
2 use.

3 MS. MACCABEE: My question is real  
4 simple: Why isn't the number there?

5 MR. BOUCHARD: Because there are nine  
6 different IBI models for both the fish and the  
7 macroinvertebrates. And the actual score that's needed  
8 for each IBI model to meet the three different tiers is  
9 different. So, if you look at the biological  
10 criteria --

11 MS. MACCABEE: I want to make this  
12 real simple. If you've ever gone and had your blood  
13 tested at the doctor's office, what they will have is  
14 the actual results of your blood and then they'll put  
15 the normal in a range.

16 In terms of intelligibility, if for  
17 this particular stream there's a range for appropriate  
18 IBI, it would be very simple to put what the actual  
19 number is and then what the expected ranges are.

20 But this way there's really no  
21 intelligibility. I or anybody else who lived next to it  
22 would have no way of knowing what was found here.

23 I mean, you may be very sure what is  
24 a good habitat, a fair habitat, and poor habitat. And  
25 there's no -- nothing in the rule. That seems to be a

1 critical determination. Once you get your IBI number,  
2 the next stage, is your habitat poor.

3 I'm not saying you didn't do the  
4 analysis, I'm saying that there's nothing in this  
5 document that would allow anybody to evaluate was this a  
6 really bad score or was it just barely at the edge.  
7 What is the standard for this kind of a water? And that  
8 lack of transparency is really problematic.

9 JUDGE MORTENSON: I think you were  
10 explaining why about that IBI. And I'm interested in --

11 MR. BOUCHARD: Judge Mortenson, so  
12 the IBI score thresholds are different. For example, if  
13 you look in the rule --

14 JUDGE MORTENSON: They're different  
15 for?

16 MR. BOUCHARD: For different types of  
17 streams. So, there's nine different models for fish,  
18 these index of biological integrity models, and there's  
19 nine different models for the macroinvertebrates.

20 And because they're different and  
21 because they're from different parts of the state, the  
22 numbers will mean something different, depending on what  
23 type of stream you are in.

24 So, a score of 50 doesn't necessarily  
25 mean the same thing if you're in a northern river versus

1 a southern headwater stream.

2 So, because of that, the MPCA thought  
3 it would be helpful to provide these essentially  
4 normalized scores so that the reader wasn't flipping  
5 back to these thresholds and trying to determine where  
6 that IBI score fell in terms of those biological  
7 criteria.

8 But we'll certainly take  
9 Ms. Maccabee's comments into consideration in formatting  
10 these documents.

11 JUDGE MORTENSON: I think I  
12 understand what's going on. I think you understand each  
13 other.

14 MS. MACCABEE: Judge Mortenson, I  
15 think I understand that Dr. Bouchard didn't do it  
16 incorrectly. I'm just saying from a transparency point  
17 of view, there's two things that I would ask for.

18 One, there should be a simple  
19 document that a person can say with each of the  
20 characteristics, these are the nine models, this is  
21 where they apply, this is good, medium, poor for each of  
22 these water bodies.

23 And there should be something that I  
24 could look up in rule and say, okay, this is a 42, it  
25 means something depending on where I am.

1                   And any kind of an analysis where  
2 you're providing information to the public you should  
3 have what the number is and then in parentheses what it  
4 means for that water body or adjacent column.

5                   I'm not saying that there's anything  
6 here that's not being done right on the IBI, my concern  
7 on the IBI is the transparency.

8                   I do believe that there's no  
9 information here suggesting that the contributing  
10 effects of pollutants were taken into account, that  
11 downstream effects were taken into account or that any  
12 effort was made to see if the IBI was better.

13                   Granted, the ditch may have been  
14 there since 1962, but over time that water might have  
15 been degraded so that it would have passed your IBI for  
16 general use but for the factory upstream. And  
17 especially if the factory is discharging specific  
18 conductance or the mine is.

19                   There is no numeric standard that  
20 would stick that on the impaired waters list. This is  
21 your only shot is that IBI.

22                   So, that's the reason why I asked for  
23 those changes, not because I want to dismiss this out of  
24 hand, but because there are some steps missing in your  
25 chart.

1 MR. BOUCHARD: Judge Mortenson, we  
2 understand and appreciate the comments and we'll respond  
3 to them.

4 JUDGE MORTENSON: Okay. Thank you.  
5 Any questions of Ms. Maccabee? Thank you very much for  
6 your comments, it's very helpful.

7 MS. MACCABEE: Okay, Your Honor. And  
8 I really appreciate -- I should say thank you for  
9 letting me talk so long and really listening. And I'm  
10 pretty impressed that you're mastering it in such a  
11 short time of some of these very difficult subjects.

12 JUDGE MORTENSON: Mastering is a far  
13 cry from where I'm at. Does anyone else have any --  
14 based on what you've heard this evening have any  
15 questions or comments before we conclude this public  
16 hearing?

17 MR. LENCZEWSKI: If I may. Having  
18 listened in, I guess a suggestion to follow up on  
19 Ms. Maccabee's point about the IBI scores.

20 I understand there's both a fish and  
21 invertebrate one and I understand there's nine  
22 different, depending on region and all that sort of  
23 thing.

24 But I think you could have the actual  
25 number for each of those two indices, a fish and

1    invertebrates, along with the appropriate range for the  
2    appropriate index.

3                    You wouldn't have to explain all the  
4    nine, just list on the chart which one is appropriate  
5    for that water body and show the normal range. So, that  
6    might be one way to go about it.

7                    It's been talked a number of times  
8    about the ditching and the habitat and the need for  
9    restoration of it. And just to be clear, we have some  
10   ditched trout streams, they're ditches and they have  
11   wild trout in them.

12                   So, the thing with a stream, it's  
13   just physics, they try to re-meander themselves. You  
14   straighten them and over time they will try to get back  
15   to a sinuous pattern, that's what streams do, you can't  
16   stop it.

17                   So, just something to keep in mind  
18   with ditch systems, they actually can, depending on  
19   temperature and other things, even though you think the  
20   habitat is pretty destroyed, they actually can even  
21   support trout. So, this is something to think about as  
22   you look at these. Thank you.

23                   JUDGE MORTENSON: Fascinating. And  
24   I've learned a lot more about ditches than I -- and I  
25   don't mean that facetiously.

1                   It's been explained -- I've lived in  
2 Minnesota all my life, I know the difference between a  
3 stream running down into Lake Superior and what I find  
4 when I travel to Southwest Minnesota.

5                   I never realized how similar, in  
6 fact, they might be and all the law that goes into  
7 those. That's another discussion, but I appreciate you  
8 all bearing with me.

9                   MR. LENCZEWSKI: Thank you.

10                  JUDGE MORTENSON: Anything else? All  
11 right. With that, now we'll conclude our public  
12 hearing. As I indicated earlier, the comment -- the  
13 additional written comments will be accepted until  
14 March 17th, which is 20 working days from today.

15                  And then there will be a five working  
16 day period for rebuttal comments to anything that's come  
17 in thus far, not original comments.

18                  And then, my report, I'll be working  
19 on my report, which I'm not going to describe in detail.  
20 I referred you all to the state rule that I rely on in  
21 constructing that. I just don't have the time or energy  
22 to go into that administrative legal stuff, which is a  
23 whole different language than we've been using tonight,  
24 talking about this fascinating material.

25                  So, with that, thank you all for your

1 time and patience and have a safe ride home tonight.  
2 (Hearing concluded at 8:00 p.m.)  
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## 1 REPORTER'S CERTIFICATE

2  
3 I, MARCIA L. MENTH, do hereby certify that I  
4 recorded in stenotype the hearing on the foregoing  
5 matter on the 16th day of February, 2017 at St. Paul,  
6 Minnesota;

7  
8 That I was then and there a Notary Public in  
9 and for the County of Wright, State of Minnesota;

10  
11 I further certify that thereafter and on that  
12 same date I transcribed into typewriting under my  
13 direction the foregoing transcript of said recorded  
14 hearing, which transcript consists of the typewritten  
15 pages 1 through 169;

16  
17 I further certify that said hearing transcript  
18 is true and correct to the best of my ability.

19  
20 WITNESS MY HAND AND SEAL this the 22nd day of  
21 February, 2017.

22  
23  
24 \_\_\_\_\_  
25 MARCIA L. MENTH  
Court Reporter